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ABSTRACT

This handbook for participants in a needs assessment workshop was designed to supplement training. The workshop is conducted over a period of two days. A leader's manual describes how to conduct the Evaluation Workshop. A schedule is outlined and objectives are stated. The participants are given instruction and practice in methods of conducting an evaluation in their educational institutions. The Center for the Study of Evaluation Model is divided into five phases. The phases of the decision making process are needs assessment, program planning, implementation evaluation, progress evaluation, and outcome evaluation. Student performance may be measured by published tests. There are many subjective instruments and techniques available to supplement this information. There are four important areas in needs assessment. They include determining the full range of educational objectives, determining the relative importance of objectives, assessing the extent of needs, and determining the final relative priority of needs. (DWH)

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PARTICIPANT'S NOTEBOOK

Developed at the Center for the Study of Evaluation
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EVALUATION WORKSHOP II: NEEDS ASSESSMENT/Preliminary Version

CTB/McGraw-Hill
Monterey, California

EVALUATION WORKSHOP II: NEEDS ASSESSMENT

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INTRODUCTION TO EVALUATION WORKSHOP II: NEEDS ASSESSMENT

Needs assessment entails stating the objectives to be met by an educational program and determining how well an existing program is meeting those objectives.

Workshop Goal

This workshop is directed toward the goal of:

> Providing you with training in the procedures needed to conduct or participate in a needs assessment evaluation in your own educational institution. These procedures, along with the reference materials you receive, will help you to identify high priority need areas for your own particular setting.

Specific Workshop Objectives

The degree to which participants develop such an understanding of needs assessment will be indicated through attainment of the following specific objectives:

- Listing, in order, the major phases of a needs assessment and matching these with the key procedures and purposes of each phase.
- Describing the major approaches for identifying and developing objectives for a needs assessment and listing the merits and disadvantages of each approach.
- Describing the major methodologies of combining ratings from various groups and using these techniques to rank objectives in order of their importance.
- Listing the major factors to consider in setting up a data collection system.
- Setting appropriate standards of student performance.
- Identifying goal and objective areas that should be the focus of subsequent planning activities.

During the next two days of training, you will have practice in selecting and rating objectives, combining ratings, setting standards, collecting data on needs, and selecting important objective areas. In addition, in your own workbook, you will receive materials on how to obtain and combine ratings, materials on kinds of evaluation instruments and their relative strengths and weaknesses, materials on setting standards and determining student discrepancies, and materials dealing with selecting goal areas for subsequent planning activities.

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THE ROCKPOINT UNIFIED SCHOOL DISTRICT

Background

Rockpoint Unified School District is an urban school district in the Midwest. Development of the city resulted primarily from industrial growth during and after World War II. A significant percentage of the city's population consists of immigrants who moved to the area during and immediately after the war. At present, families are beginning to move into the area seeking employment in higher paying jobs. These newer families tend to be from lower economic levels and represent several different ethnic groups.

The district has 20 elementary schools, many of which are old and in bad condition. Some of the newer schools were built quickly with inferior construction materials. Average daily attendance for the elementary schools is 6,000, with classes averaging around 30 students each. Rockpoint elementary schools have populations composed mainly of white, black, and Spanish-speaking students. Some schools are composed almost entirely of one of these groups, while a few are more evenly distributed across these three groups.

Twenty-three per cent of the students have parents who are professional or white collar workers, while 77 per cent have parents who are either skilled or unskilled workers. The city's ethnic groups are distributed as follows: 66 per cent white; 21 per cent Spanish-speaking; and 12 per cent black. Approximately 15 per cent of the district's students do not speak English at home.

Summary of Problem Areas in Rockpoint Unified School District

1. Parents' concern over the poor reading skills of their children and the methods now used in teaching reading.

2. Teacher concern over low reading and mathematics scores.

3. Administrative concern over poor student performance in mathematics and reading and deterioration of student attitudes toward learning and the school.

4. Administrative concern with accountability in terms of student performance.

5. Low levels of funding for the district and the possibility of more cuts in the district budget.

6. Pressure from the State Department of Education for community involvement in determining educational programs and curricula.

Newspaper Article

SCHOOL BOARD MEETING ERUPTS AS PARENTS DEMAND CHANGE

Rockpoint, April 17 -- Angry parents demanding to know how district funds are being budgeted for next year interrupted the School Board's regular meeting last night.

Edward Cisneros, president of the Spanish-Speaking League for Education, attended the meeting as a spokesman for a proposed citywide compensatory program for non-English-speaking students. He was criticized by members of the Parents for Better Education Coalition (PBEC) on grounds that the programs he advocated would aid only a small percentage of the population. The cost of the compensatory programs would limit development of the Child Enrichment Program under study by the Board, according to PBEC members.

Dr. Sullivan, recently elected Board representative from the Chatsworth District, moved that further discussion of next year's budget plans be tabled until more complete cost figures for these two programs could be presented along with cost estimates for school building maintenance and remodeling. The board adopted Dr. Sullivan's motion over objections from the floor.

Board President A. R. Cunningham agreed to establish ad hoc committees that would study the costs of each major new program under consideration. Reports from these committees will be heard before the final June budgeting meeting of the Board.

Editorial from Local Newspaper

Educational Priorities: A Look at Our School Board

This author has watched the recent School Board meetings with interest and trepidation. It is clear that urgent needs of our children are not being met in our schools. It is also clear that different children have different needs. To this author, it appears that School Board members have been trying to use a shotgun approach in meeting these needs. Few, if any, attempts have been made by the Board to develop reasoned judgments on a priority basis.

The School Board of this city, trying to be all things to all people, has attempted almost every new approach that is suggested. The intentions of the Board are admirable; unfortunately, none of these new approaches has much of a chance for survival because each begins life with two strikes against it because of budgeting restrictions.

We, the School Board constituency, have the right to expect our representatives to use our money and the resources of our fine teaching staff to best advantage. The individual consumer who makes his buying decisions based on whim rather than on a list of needs ranked for priority is apt to find himself in bankruptcy court. The School Board that does not examine the needs of its students with an eye to priorities is apt to find itself facing irate taxpayers who vote down bond issues.

Letters to the Editor

The following two letters written to the major newspaper in the area are representative of the kinds of complaints and arguments occurring over the district's educational problems.

Dear Editor:

In spite of consistently miserable performance by our children, we keep getting the promise that they will learn to read. This promise does not apply to my third-grade daughter. It seems to me that all the assurance in the world will not help our children as long as the present method of teaching reading is in force.

Our schools are using the "look-say" method of learning which gained popularity about thirty years ago when proven methods of good teaching were kicked out. It is time that the Board of Education took a look at the failure of our reading program and got back to the old tried-and-true methods of teaching.

Also, I was under the impression that all Americans are to have the same educational opportunities. Yet it seems that some students get preferential treatment and special instruction. Do they deserve more instructional time than my child?

I'm tired of people who continue to demand special programs for a small percentage of students. No matter how you look at it, reading is reading, and our children are not learning to read the way they should. Children will never get ahead if they can't read.

Concerned Parent

Dear Editor:

This is in response to the letter from "Concerned Parent" who does not really understand the problem. The point is that no one can prove that one method of learning to read is any better than another. The only thing all reading specialists agree on, regardless of whether they support the look-say, phonics, or language experience method, is that reading results could and should be better than they are.

Statistics confirm what we all know. Not only is the white student not learning to read as well as we would like, but the nonwhite minority student is doing even worse. At present the minority child, black or brown, learns to read in what amounts to another language. He must _unlearn_ language patterns that he has learned in his home in order to learn what the school says he must. When a minority student reverts to the language he feels most comfortable with, he is often accused of using "substandard" English.

Perhaps the black student should be taught to read Black English before attempting to learn White English. In that way, he can learn basic decoding skills before he has to learn a new language (i.e., White English). In the same way, Spanish-speaking students might be taught to read in their own language before being taught to read English. In each case, the child will not be asked to forget what is a part of him, and his background can be used as a bridge to what is new, rather than an obstacle to his progress.

If we are going to solve the problem of nonreaders, regardless of ethnic group, we have to innovate and take calculated risks to seek improvements in our teaching methods and techniques. The School Board and community ought to think about this, and allow teachers the freedom they need to help their students.

Concerned Teacher

INTERDISTRICT MEMORANDUM

TO: Jonathan Edwards
Superintendent
Rockpoint Unified School District

FROM: John Alden
Principal
William Bradford Elementary School

SUBJECT: District Reading and Mathematics Problems

DATE: October 2, 1973

Since I spoke to you about Bradford School's problems, Liz Fitch, our reading curriculum specialist, and I took a close look at elementary performance scores, and came up with some disturbing facts in two or three areas.

Mathematics scores for Grades 1, 2, and 3 still lag national norms. Results indicate that schools with small minority populations achieve higher scores than schools with large minority populations. However, even those schools with mostly white student populations are only at or slightly below national norms in mathematics skills.

The other major districtwide problem is reading. Most of our third-grade classes scored below the national norm. Of the district's elementary schools with large minority populations, only two had third-grade classes that equaled the national norm. Also, regardless of the school population characteristics, one-fourth of our elementary schools fell below the 16th percentile, and only two schools scored above the national norm.

On top of all this, the teachers are saying that the students obviously don't show much interest in school and simply have little desire to learn.

These are the areas we have to be concerned about. Even though our funding is already low, it will probably get worse unless we begin to show improvement. Accountability and evaluation are key words for this decade. Unless we get concerned right now and develop community support, we're in trouble.

John

John

cc: District Elementary Principals

INTERDISTRICT MEMORANDUM

TO: John Alden
Principal
William Bradford
Elementary School

FROM: Jonathan Edwards
Superintendent
Rockpoint Unified School
District

SUBJECT: Needs Assessment

DATE: October 19, 1973

I have had a chance to review the testing results and I agree wholeheartedly with your analysis of our problem areas. I am particularly interested in the growing public concern with accountability. I sense greater emphasis from the legislature to recognize community concerns in our education programs and plans.

We are going to have to find out what our real problems are, let the community know what we are trying to do, and enlist their support. I think I know one way of starting this. What I am suggesting is that we solicit community involvement in defining educational problem areas and how we might solve them. I'm not sure just how much of the community should be involved, but for a start I'm going to ask for teams of principals, teachers, and parents from each elementary school to see if we can find out what they think the schools should be doing. If any general trends across the district become apparent, we can begin to attack them at that level.

I'm still not sure how we will handle the mechanics of this approach. I would welcome any suggestions you have as to how this might be accomplished. When I have it more firmly thought out, I will inform you and the other principals.

Sincerely,

Jonathan

Jonathan

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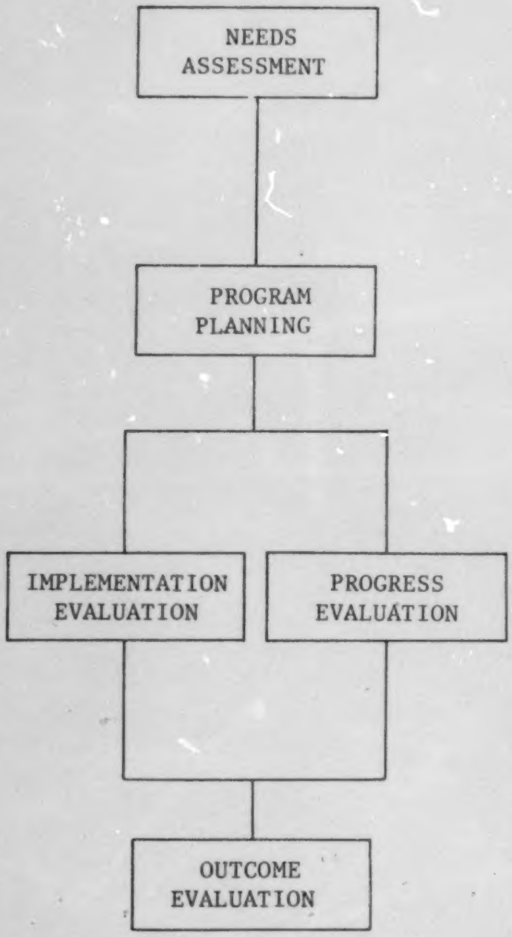
CSE EVALUATION MODEL

Evaluation is the process of determining the kinds of decisions that have to be made and selecting, collecting, and interpreting the information needed for making these decisions.

Five evaluation phases provide the framework for the decision-making process:



Needs Assessment entails stating the objectives to be met and determining how well an existing program is meeting these objectives. This information is used to identify school or program needs.

Program Planning provides the project director with tools to help make planning decisions. This step develops procedures that will be needed for assessing whether the program is operating as planned and how well it is achieving its objectives.

Implementation Evaluation. Once the program is in operation, Implementation Evaluations provide the project director with information on the extent to which the specified elements of the program have been implemented as planned.

Progress Evaluation provides information about the progress of the program's components in meeting the program's objectives. This information is used to modify the program where necessary.

Outcome Evaluation provides information about the success of the entire program. This information can support a decision to maintain, modify, expand, or discontinue the program.

The remainder of Section C contains an optional exercise designed to reinforce your understanding of the CSE Evaluation Model. Depending on your familiarity with the model, the leader may or may not direct you to complete this optional exercise. Please indicate to the leader your interest or need to complete the exercise concerning the CSE Model when he asks. If you have attended Evaluation Workshop I or have been introduced to the CSE Evaluation Model elsewhere, it is probably not necessary for you to complete this optional exercise.

If the majority of participants feel no need to complete the optional exercise, but you still are uncertain about the model, it is included on pages C-3 through C-6 as a resource to which you can refer and study later. You do not need to complete this optional exercise to continue in the workshop. The important aspect to remember is that needs assessment is the first phase of the CSE Evaluation Model and that the focus of this workshop will be on how to accomplish the steps within the needs assessment phase.

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CSE Evaluation Model Exercise

The Center for the Study of Evaluation has developed a five-phase model of educational evaluation. The five phases are:

1. Needs Assessment
2. Program Planning
3. Implementation Evaluation
4. Progress Evaluation
5. Outcome Evaluation

During each of these phases, the individual responsible for conducting an evaluation focuses his attention on certain activities. In this exercise, you will work with a list of 15 specific evaluation activities.

On page C-3 you will find a list of the 15 evaluation activities, and on page C-4 you will find a partially completed diagram of the Center's five-phase model of evaluation. Your team's task is to categorize these 15 evaluation activities in terms of their appropriateness to each phase; i.e., to select the evaluation phase that represents the time most appropriate for conducting each activity.

Read the description of each activity on page C-3. Each description of each activity is summarized by the two- or three-word title preceding it. After you have finished reading the activities, turn to page C-4 and write the short title of each evaluation activity in the boxes within the appropriate phase of the evaluation model.

The first two of the 15 activities have already been categorized for you on the partially completed diagram on page C-4. Categorize the remaining 13 activities in the same manner. You should classify three activities within each major phase of the CSE Evaluation Model. You will have 10 minutes for this exercise.

Evaluation Activities

1. Select Objectives: Selecting a set of objectives from a list of instructional objectives.

2. Review Results: Reviewing the results of the program to decide whether that program should be continued or dropped.

3. Investigate Instructional Materials: Developing procedures to investigate which of several kinds of instructional materials should be used in the program.

4. Establish Standards: Establishing standards of performance to determine whether students have already achieved certain objectives before a new program is selected.

5. Prepare Interim Report: Preparing an interim report on whether the program is on schedule in meeting its instructional objectives.

6. Prepare Evaluation Design: Deciding on the appropriate evaluation design to ascertain the effectiveness of the program.

7. Review Program: Reviewing a program proposal to ascertain what to look for as a basis of deciding whether students in that program are using the special equipment appropriately.

8. Classroom Observation: Observing a teacher's class to find out what he or she might be doing to account for the class' unusually high test scores.

9. Prepare Summary Report: Preparing a summary report on which students appeared to profit most from the program.

10. Rate Objectives: Developing effective methods of combining the ratings of objectives that have been rated by such individuals as parents, administrators, and students.

11. Establish Feedback Procedures: Establishing procedures for returning students' scores on the weekly evaluations to the teachers within two days.

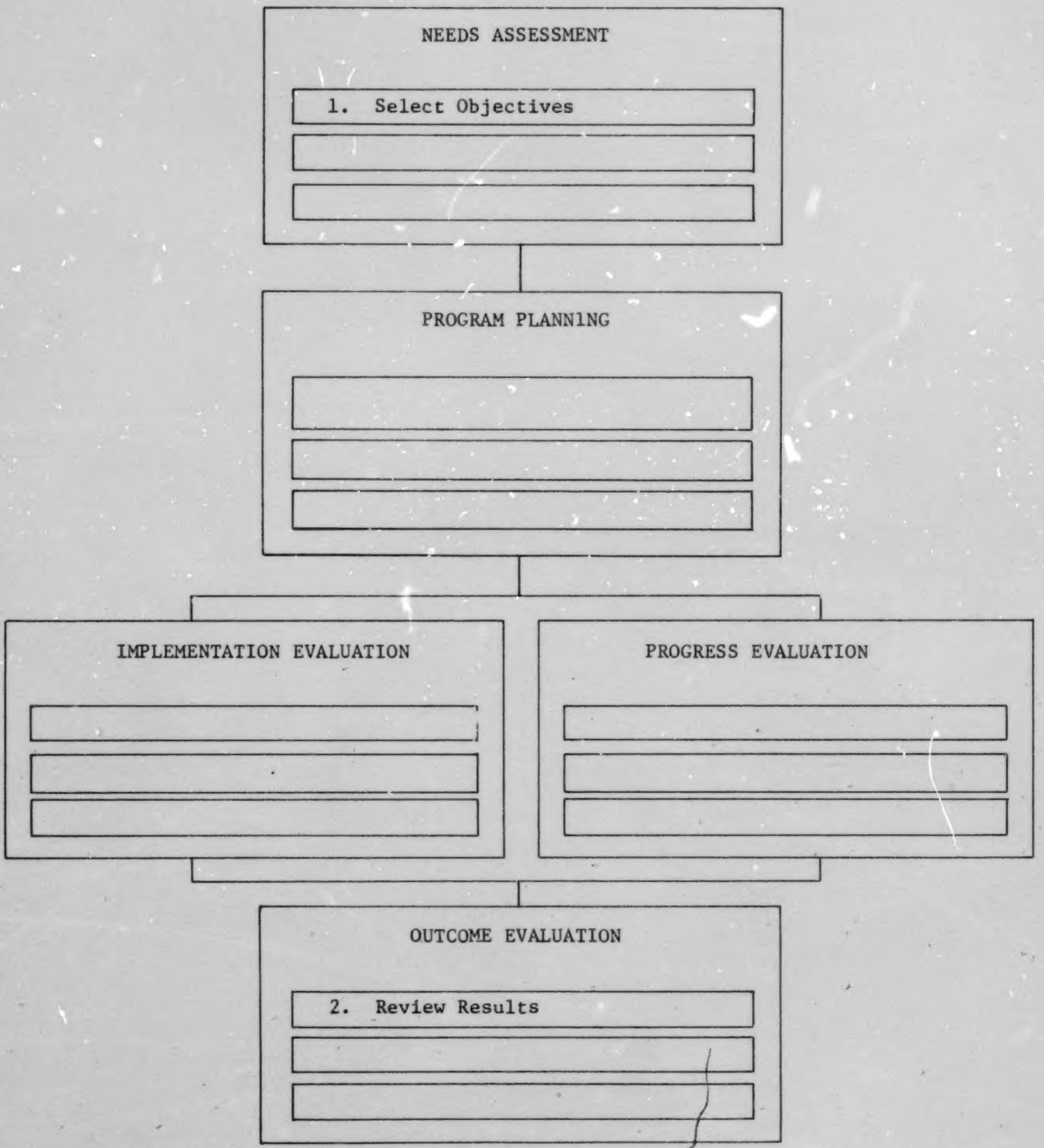
12. Evaluate Student Interest: Going back over the data collected during the program to find out whether student interest in the subject matter increased, decreased, or remained the same.

13. Check Instructional Sequences: Devising a checklist to determine whether teachers followed the specially prepared lesson plans detailing the sequence for a given unit of instruction.

14. Report Student Achievement: Reporting the students' average score on each of the objectives of the program's first unit.

15. Planning Data Analysis: Deciding how the data about a program will be analyzed and reported.

CSE Evaluation Model Exercise


NEEDS ASSESSMENT
1. Select Objectives
PROGRAM PLANNING
IMPLEMENTATION EVALUATION
PROGRESS EVALUATION
OUTCOME EVALUATION
2. Review Results

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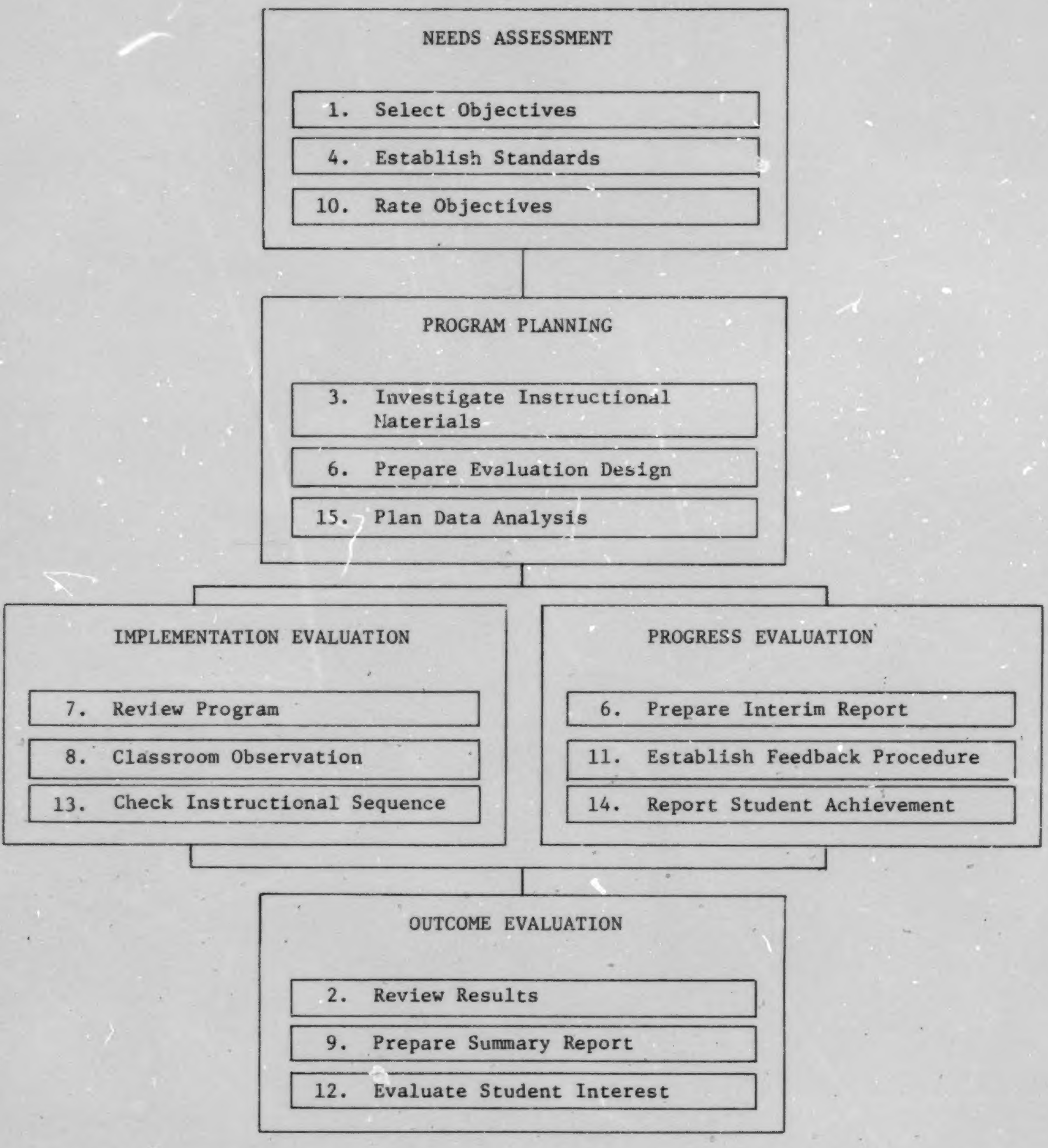
CSE Evaluation Model Exercise -- Feedback



NEEDS ASSESSMENT

1. Select Objectives
4. Establish Standards
10. Rate Objectives

PROGRAM PLANNING

3. Investigate Instructional Materials
6. Prepare Evaluation Design
15. Plan Data Analysis

IMPLEMENTATION EVALUATION

7. Review Program
8. Classroom Observation
13. Check Instructional Sequence

PROGRESS EVALUATION

6. Prepare Interim Report
11. Establish Feedback Procedure
14. Report Student Achievement

OUTCOME EVALUATION

2. Review Results
9. Prepare Summary Report
12. Evaluate Student Interest

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CONTEXTUAL INFORMATION

Project/Program Title: School-by-School Needs Assessment of the Rockpoint District

Administrative Director: Jonathan Edwards, District Superintendent

Field Directors: Individual School Principals

Purpose: To identify Rockpoint's most important educational needs

Scope: 20 elementary schools in the Rockpoint District

Method: Evaluation teams will work within each of the 20 schools to assess the needs of each school. These 20 individual reports will be returned to the Superintendent who will determine the most important needs areas within the district.

Funding Level and Source(s): $2,000 from regular operating funds per school

Number of Students: Approximately 6,000 (300 per school)

Duration of Project: Three months

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NEEDS ASSESSMENT OUTLINE

I. Purposes of a Needs Assessment

The information gathered in a needs assessment can be used in the following ways:

A. Identifying educational needs and determining their relative priorities.

B. Facilitating planning decisions regarding allocations of resources such as personnel, funds, and equipment.

C. Providing justification for applying resources to some needs and not to others.

D. Providing a standard against which the quality of decisions in applying resources to one needs area over another can be assessed.

II. Steps in a Needs Assessment

Regardless of the level at which the needs assessment is conducted these same four steps are followed:

A. Determining the full range of potential educational objectives that are advocated as worthwhile by various groups.

B. Determining the relative importance or value of these potential objectives to the "community" the educational system serves.

C. Assessing the extent to which there is a need or discrepancy between desired and actual performance on those objectives perceived as important.

D. Determining the final relative importance of these needs.

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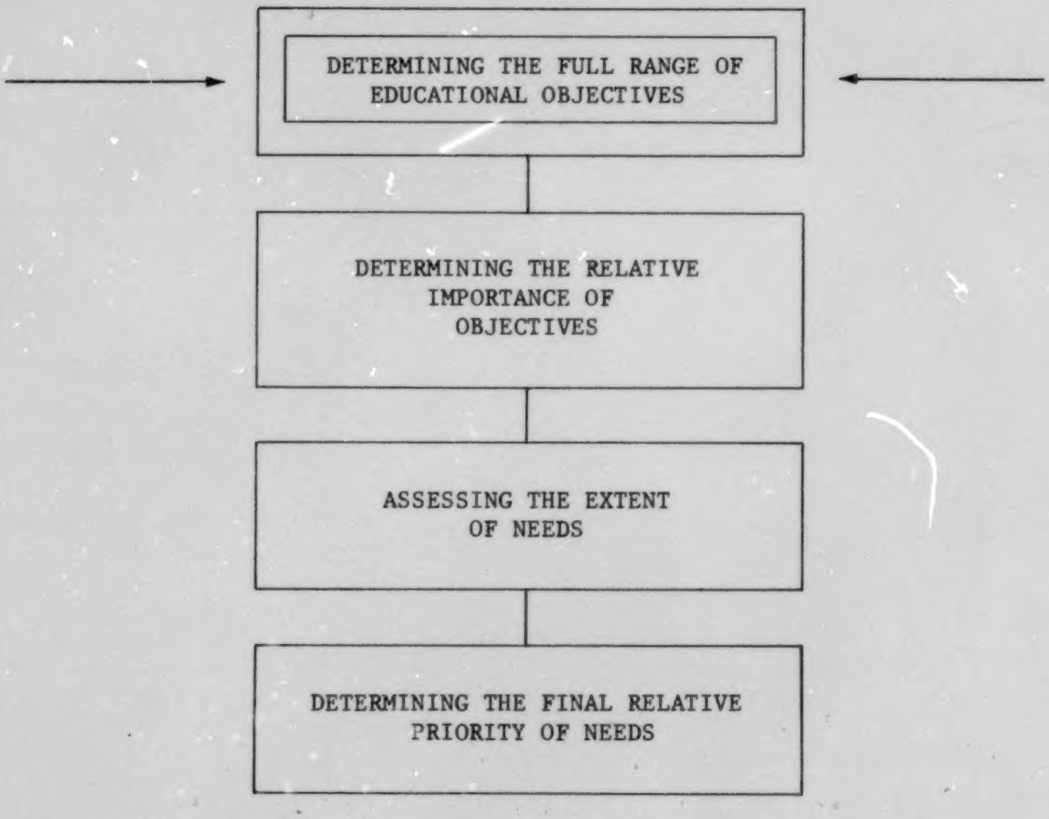
NEEDS ASSESSMENT
STEPS


DETERMINING THE FULL RANGE OF EDUCATIONAL OBJECTIVES
DETERMINING THE RELATIVE IMPORTANCE OF OBJECTIVES
ASSESSING THE EXTENT OF NEEDS
DETERMINING THE FINAL RELATIVE PRIORITY OF NEEDS

OBJECTIVES IN A NEEDS ASSESSMENT

Introduction

Educational goals can be written at different levels of specificity depending on their intended use in the instructional process. A convenient division of the level of specificity of educational units is goals, educational objectives, and performance objectives. Goals are often expressed in rather general terms, which describe the end result of a large number of courses in the educational process. There are literally hundreds of goals for the educational process. These are usually expressed in statements such as:

> We must improve the reading level of our students.
>
> We must make our children aware of the total range of vocational choices available to them.
>
> We must prepare our children to become good citizens and productive members of society.
>
> Our high school graduates must understand the social, political, and economic forces that impinge on their lives.

Each of these statements is a valid educational goal describing a general outcome or aim of an instructional process over a long period of time. The educational goal is a statement of general intent with only broad directions given for instructional activities.

At another level of specificity is the educational objective. Educational objectives are basically statements of observable learner behaviors that are a result of some educational experience or segment of instruction. Examples might include such statements as:

> The student will be able to apply a phonetic approach to word attack.
>
> The student will be able to identify several sources of vocational information.
>
> The student will identify the major checks and balances within the U.S. governmental structure.

Educational objectives are more specific than goals and concern categories or classes of behaviors that can be observed in the learner as a result of an instruction segment.

Performance objective statements are even more specific. Performance objectives are precise descriptions of an observable, measurable behavior that the learner should demonstrate after a specific instructional input. Examples could include statements such as:

> Given a list of phonetically spelled words, the student will match them with words printed with correct dictionary spelling.
>
> Given a list of job descriptions, the student will be able to identify them with appropriate occupational classifications and titles.
>
> Given a list of governmental powers, the learner will be able to classify them as belonging to the judicial, executive, or legislative branches.

Performance objectives provide a basis for measuring the extent to which the learner has actually achieved the desired behaviors. Performance objectives provide the yardstick by which educational goals can be measured.

The educational units of goals, educational objectives, and performance objectives are parts of a hierarchical structure with goals being more general than educational objectives and educational objectives being more general than performance objectives. The most important feature of this hierarchical system of specificity is that it requires that a rational relationship among performance objectives, educational objectives, and goals be determined and specified so that each is related to the general or overall intent of the educational system.

The first step in a needs assessment is to determine the full range of educational objectives appropriate to the educational system being evaluated--whether it be a class, school district, state, or nation. The level of specificity of the objectives chosen will depend largely on the system for which the needs assessment is conducted. From this comprehensive list of educational objectives, a final set of appropriate objectives can be selected to form a basis for program planning.

One of your tasks in this workshop will be to select the important educational objectives for Rockpoint District. However, before you can make this selection, you must first identify a complete set of potential objectives appropriate to the particular educational institution. Two major factors must be considered in identifying these potential objectives: (1) sources from which objectives can be obtained and (2) methods of developing sets of educational objectives.

Sources for Objectives

Sources that a project director should consider in developing a comprehensive set of objectives include:

- State, federal, and local laws.
- Local and national concerns as identified in editorials, articles, proposed legislative actions, and similar materials.
- Parents' concerns indicated by letters, PTA meetings, and conferences with individual parents.
- Community concerns as voiced by business organizations, special interest groups, and others.
- School records and reports, such as attendance, discipline, career choices of graduates, and test scores.
- Curriculum guides, program descriptions, and recommendations of responsible institutions and organizations, such as the National Science Foundation, and the National Assessment Project.
- Opportunities for graduates, particularly in terms of educational requirements that must be met for initial employment or entry into the next level of education.
- Teachers' reports and comments.
- Student requests and comments.
- Prepared composite sets of objectives and goals.

The list makes it apparent that developing a truly comprehensive set of objectives requires a major effort. At least two methods are now in fairly common use in school districts around the country: (1) mandates by school boards or school administrations and (2) appointment of special committees. A third method, which avoids the drawbacks of the above methods, will also be presented and discussed in this section. It is around this final method that this workshop will evolve, but a short discussion of the other two methods is given first.

Methods for Developing Sets of Educational Objectives

Mandate by the School Board or School Administration. The mandate approach is based on the rationale that school boards, as the elected representatives of the community or the administrative staff, form the body of "experts" with the necessary skills and information to determine the most important objectives to be established and achieved by the educational system. Although this method is often less costly than other approaches because total man-hours expended to develop objectives are reduced, it has some serious drawbacks. First, the objectives generated may only partially represent the possible objectives advocated by different segments of the community that the educational system serves. Furthermore, this group tends to place financial and legal considerations above others in establishing educational objectives. Finally, this approach usually results in a list of generalities, which may be interpreted differently by anyone who reads them. Such an approach can result in the educational program being set by tradition, the textbooks that happen to be in use, strengths and weaknesses of individual administrators, and intraschool politics. The mandate method seldom produces a full range of educational objectives to focus on in a needs assessment evaluation.

The Committee Approach. Another common method for construction of objectives is appointment of a committee by those responsible for conducting the needs assessment. Such committees are chosen to develop objectives for specific content areas such as social studies or science. Such committees vary in their composition, but they usually comprise representatives from one or more of the following groups: teachers, curriculum specialists, administrators, and community representatives.

The major positive feature of the committee approach is that the diversity of backgrounds, values, education, and philosophies of committee members can lead to consideration and generation of a wider cross section of educational objectives than might otherwise be the case. Although the committee approach offers a framework in which group consensus and involvement regarding important educational objectives can develop, there is a real danger that the committee can become fragmented, especially if dominant members have opposing viewpoints and waste valuable committee time trying to persuade "followers" to their side. A major difficulty of the committee approach is its inability to select from groups who represent the whole, especially community groups. There is a tendency to select from among articulate and interested parents, which leaves important groups unrepresented. Furthermore, committees traditionally are cumbersome to establish and coordinate and take significant amounts of time to deliberate objectives to be included as important and worthwhile.

Thus, it is clear that the two commonly used methods for developing objectives have major shortcomings that may explain why they have rarely had significant impact on school planning.

Selection from a Comprehensive List of Objectives. Both the mandate and committee methods share another major disadvantage in that they require constant duplication of effort. This situation has led to preparation of banks or pools of objectives from which representatives of states, districts, or schools can select objectives appropriate for their needs. The essence of this method is that the user selects educational objectives appropriate to his purposes from existing sets of objectives rather than constructing them himself.

One example of this method is the System for Objective-Based Assessment in Reading, or SOBA-R, developed by the Center for the Study of Evaluation as a prototypical list. SOBA-R divides the reading domain into six major areas, each of which is further divided into curricular components in a branching fashion. Objectives are ordered hierarchically from broadly stated goals of reading to the highly specific performance objective level. More than 1,100 performance objectives, as well as pools of items to measure achievement of each reading objective, make up the SOBA-R system. A similar system could be developed for other curriculum areas using essentially the same techniques.

An existing pool of goals and educational and performance objectives is provided by the Instructional Objectives Exchange (IOX). They distribute 45 widely used objective collections, with measurement items for each objective. From these collections, educators may select objectives appropriate for their particular educational situation. The IOX booklets cover all subject areas at elementary and secondary levels, as well as personality, interests, attitudes, and opinions.

The National Assessment of Educational Progress (NAEP) provides another source of goals and objectives. NAEP is an annual national survey of the knowledge, skills, understandings, and attitudes of groups of young Americans. They make available descriptions of objectives and subobjectives for each NAEP subject area. These objective descriptions are included in a booklet along with information concerning the process of their development.

Another bank of objectives is contained in the Elementary School Evaluation KIT developed by the Center for the Study of Evaluation. This KIT is designed for widespread community use. The objectives in the KIT are not as specific as those in the SOBA-R system, but the KIT does include a wide range of goals for the primary grades.

Other sources of goals and educational objectives are the existing objective banks and pools owned by test development and publishing companies. Most test publishing concerns are now engaged in developing banks or pools of educational objectives correlated with test items to measure those objectives. These lists are often culled from major textbooks and offer a representative sampling of educational objectives. Addresses are provided at the end of this section for further information regarding the objective lists.

Thus, there are several advantages for the user of the already published objective lists in a needs assessment evaluation. Among these are that:

- A broad spectrum of possible educational objectives is provided, thus avoiding the possibility of overlooking important curricular areas.
- The expensive and repetitious development of objectives on a local basis can be circumvented by making it possible to select objectives from a comprehensive and readily usable file of objectives.
- Users may select educational objectives at the level appropriate for their specific purposes.
- Once objectives have been selected, they provide a basis for an objectives-based assessment of the extent to which the objectives are being achieved in the educational institutions under study.

During the course of this workshop, you will have an opportunity to participate in each step of the needs assessment process. You will be examining a selected subset of objectives from a total pool of potential objectives stated at an appropriate level for the Rockpoint District. The district needs assessment will indicate which of these objectives are of highest priority.

SELECTED SOURCES OF PREPARED LISTS OF EDUCATIONAL OBJECTIVES

Comprehensive Achievement Monitoring
Robert Reilly, Chief, Bureau of School and Cultural Research
University of the State of New York
State Education Department
Albany, New York 12224

CTB/McGraw-Hill
Department of Programs and Services
Del Monte Research Park
Monterey, California 93940

Instruction Objectives Exchange (IOX)
Box 24095
Los Angeles, California 90024

Minnemast Curriculum Project
Wells Hively
Department of Psychology
University of Minnesota
Minneapolis, Minnesota

Southwest Regional Laboratory for Educational Research and Development
4665 Lampson Avenue
Los Alamitos, California 90720

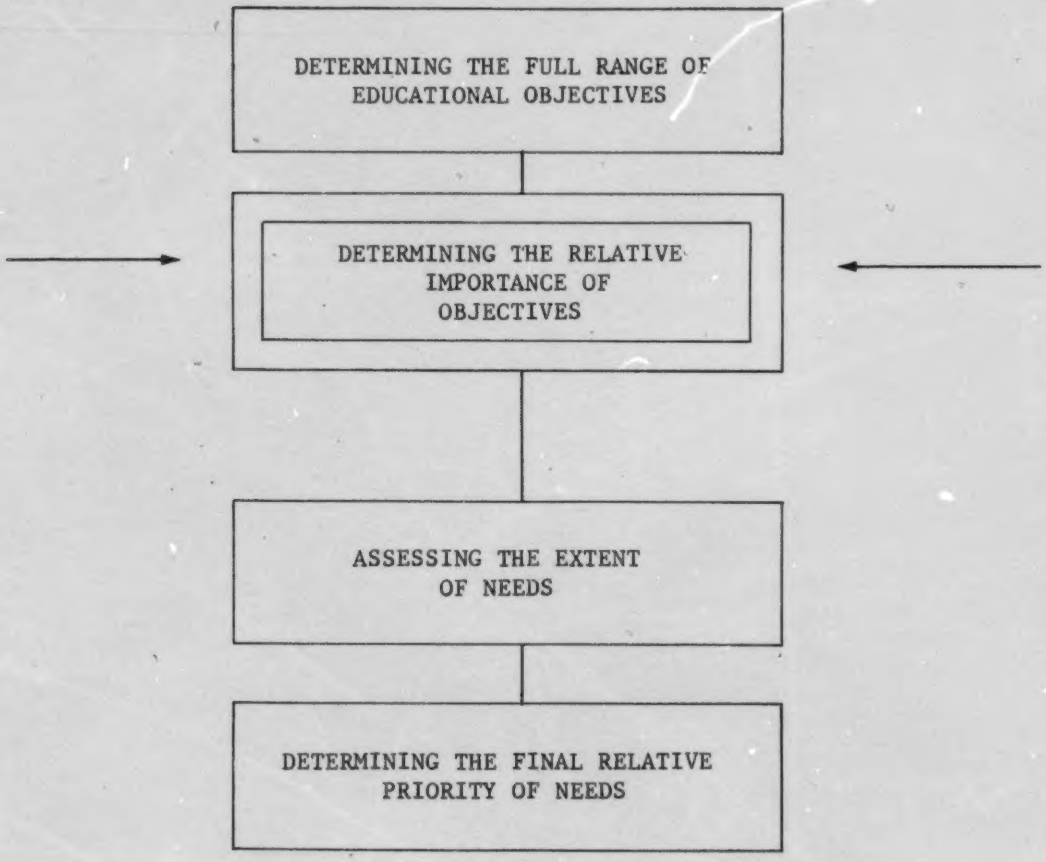
Educational Commission of the States
National Assessment Publications
300 Lincoln Tower
1860 Lincoln Street
Denver, Colorado 80230

Educational Progress
Educational Development Corporation
4900 South Lewis Avenue
P.O. Box 45663
Tulsa, Oklahoma 74145

Training Project
Center for Study of Evaluation (CSE)
145 Moore Hall
University of California at Los Angeles
Los Angles, California 90024

Richard L. Zweig Associates, Inc.
20800 Beach Boulevard
Huntington Beach, California 92648

NEEDS ASSESSMENT
STEPS


DETERMINING THE FULL RANGE OF EDUCATIONAL OBJECTIVES
DETERMINING THE RELATIVE IMPORTANCE OF OBJECTIVES
ASSESSING THE EXTENT OF NEEDS
DETERMINING THE FINAL RELATIVE PRIORITY OF NEEDS

SELECTION OF RATERS

The Reason for Rating Educational Objectives

Determining the full range of educational objectives to be considered in a needs assessment generally results in a comprehensive list of objectives. Such lists usually contain objectives varying in importance and priorities according to the educational setting in which the needs assessment is conducted. It is unlikely that such groups as school administrators, teachers, parents, and students will agree on the most important objectives for an educational system. Since it is rare that a school district will have unlimited resources to apply to all objectives perceived as important by different groups, decisions must be made as to which educational objectives will receive scarce resource allocations.

The second step in a needs assessment is to determine the relative importance of the educational objectives identified in step one. The result of the second step will be a list of objectives ranked by priorities that can be used by the educational agency to give some direction for concentration of its limited resources to those objectives deemed most important by various groups.

Designation of Those Who Should Rate Objectives

The designation of who should participate in selecting the most important objectives is an issue that each educational agency must answer for itself. High priority objectives might be selected by the school superintendent or by the district's curriculum staff under the direction of the superintendent. Teachers and building administrators often participate in the selection process, and the pattern suggested by the Rockpoint example, that of involving parents, is a common one. In some instances, representatives from student groups might even participate in the rating process. The point is that each needs assessment is conducted in a unique environment with different factors influencing the decisions as to which people will participate in rating objectives.

Selection of a Sample of Raters

If a wide variety of input from parents, teachers, administrators, and supervisors is to be considered before final decisions about priorities are made, it is obvious that opinions from each member of the different groups cannot be gathered. There are too many people, and the mechanics of gathering and synthesizing the voluminous data generated would be costly and extremely difficult. A solution would be to choose a representative sample from each group to limit participants to a number that could be handled efficiently. In theory, members of each representative group would be selected at random to work as an ad hoc committee to rate the objectives. This random selection of raters should not overlook important individuals whose input should be sought. For example, a major area of concern for most school districts is reading improvement. It would be a mistake to fail to include the district reading specialist in the objective selection process in both a technical and political sense, since this individual would have the most information about existing reading problems and would lend credibility to the rating group.

After key people are selected, additional representation is usually achieved through a sampling technique of the groups that are to be included in the rating process. Two techniques for selecting a sample are discussed below.

Selection of Raters by Random Sampling. The major concern in sampling is to ensure that raters are chosen in a completely random and unbiased manner. The procedure is as follows:

1. Obtain an alphabetical roster of the potential raters. If the raters are to be parents, the roster would be a list of the school's pupils (do not include the parents' names more than once if they have more than one child enrolled in the school). If the raters are to be selected from the general community, a list of public utility users or a county residence list could serve as the roster.

2. Decide on the number of raters (R) to be used. Between 20 and 50 raters will usually be sufficient to give an accurate enough picture of a local constituency's priorities. If the sample is to be from a city or large district, a larger number of raters is desirable.

3. Determine the total number of names (N) on the roster being used.

4. Divide N by R and round to the nearest whole number (n). For example, if there are 600 parents (a mother and father counted as one parent) and the number of raters is to be 35, divide 600 by 35 to obtain 17.4. This number is rounded to 17.

5. Select every nth name on the roster. In the example above, every 17th name would be selected until 35 names of raters were obtained. If the end of the list is reached before the desired number of names is obtained (as a result of the rounding in step 4), go back to the beginning and select every nth name from those remaining on the roster until 35 names are obtained.

Selection of Raters by Stratified Sampling. Stratified sampling from a community must be based on accurate knowledge of its composition to ensure that each subgroup of the population is represented proportionally. Potentially important population characteristics are type of occupation, socioeconomic level, ethnic origin, and amount of education. Frequently, principals who have resided in or near their school's community have accurate knowledge of the characteristics of the population. If estimates of the characteristics of the population are difficult to make, sources such as the U.S. Bureau of the Census *General Characteristics of the Population* may be consulted.

DO NOT PROCEED UNTIL TOLD TO DO SO

METHODS FOR COMBINING RATINGS

Four methods for combining objective ratings obtained from different groups of raters are discussed in this section. Combining these ratings provides a score that indicates each objective's relative importance across groups of raters. While reading this section, you will have some practice in combining objective ratings. After the section is completed, you will have an opportunity to discuss these methods with the other members of your team.

The Simple Average Among Raters

Taking the simple average rating for each objective across all raters automatically gives the most weight to ratings of the group (teachers, parents, or other) that has the largest number of raters. For example, if there are 50 parents and 25 teachers doing the rating, the parents' ranking in the final average ratings will be twice as influential as that of the teacher group.

Average Rating by Group

The problem of differential influence can be avoided by taking the average rating for each group, which automatically gives each group an equal weight. There are some problems with this approach, however, if you do not wish to assign equal weight to all groups. Also, the definition of the groups may unduly influence the results, e.g., a principal might separate teachers into five subgroups based on their area of specialty, but lump all parents together. As a result, teachers would have five times as much weight as parents.

There are some technical and statistical problems with both methods; three of them are discussed below.

1. An average may not represent the first priorities of any group. For example, if you asked parents, teachers, and students to rate four objectives (4 = most important to 1 = least important) you might get the following results:

	Objective			
Group	A	B	C	D
Parents	3	2	1	4
Teachers	3	4	2	1
Students	3	2	4	1
Average rating	3.0	2.7	2.3	2.0

This tabulation shows that Objective A had the highest average rating, but no group thought it was the most important. Conversely, Objectives B, C, and D have different ratings, but each group thought that one of these objectives was the most important. Thus, simple averaging may obscure the first priorities of certain groups.

2. Some groups or individuals may be more or less lenient in their ratings than other groups. For example, they may tend to bunch their ratings near the high or low end of the scale. This factor may make it difficult to interpret directly what is meant by a given average in different groups. A 3.7 assigned an objective by teachers may be the highest score they gave on a 4-point scale (4 = most important to 1 = least important), while a 3.7 assigned by parents may only just make the highest quarter of the ratings if all objectives are receiving high ratings. However, care in devising rating instructions that direct raters to use all the points on the distribution usually reduces substantially the problems of major differences in leniency among groups.

3. Some groups or individuals may tend to spread their ratings or bunch them together more than do other groups. For certain statistical reasons, this automatically assigns more weight to the groups whose ratings are spread the most. The tabulation below illustrates how the spread in ratings has a greater impact on the final ordering of objective priorities than does the average rating assigned by each group. Assume that both groups had a 10-point scale for their ratings (1 = least important to 10 = most important).

Objective	Parents (low average, but large spread)	Teachers (high average, but small spread)	Final Average Rating
A	1	10	5.5
B	3	9	6.0
C	5	8	6.5
D	7	7	7.0
Average	4.0	8.5	

Note that the rank order of the objective is completely opposite for the two groups (D is highest for parents, but A is highest for teachers) and that the teachers were far more lenient than parents in the sense that they tended to assign higher ratings. An inspection of the final average ratings, however, reveals that the rank order follows exactly the one used by parents and offsets the impact of the teachers. In short, the more the ratings are spread by one group, the more influence these ratings will have on the final average across groups. This is a far more serious statistical problem than problem 2 above, but it also can be minimized by stating instructions clearly and by directing raters to use all the points on the distribution.

Thus far, you can see that if you take the average rating among all raters it has the advantage of being rapidly understood by everyone --based on the democratic principle of "one man, one vote." However, this method presents problems of differential influence if you use more raters of one kind than another. Also, the average rating may not please anyone, and the technique essentially eliminates opportunities for using subsequent methods that focus on major areas of agreement and disagreement to achieve consensus in ranking objectives.

Taking the average across groups of raters has the advantage of giving each group an equal voice; however, the method still does not give sufficient attention to disparate viewpoints. Also, you may not desire to give all groups an equal voice since their expertise and degree of participation in the rating process may vary.

Assigning Equal or Differential Weight to Subgroups of Raters

A third method of objective rating is to assign weights to groups of raters. For example, you may decide to give the opinions of teachers and parents equal weight and to make this weight be twice that assigned to students. Assigning equal weights to raters has the advantage of being more easily understood and is less subject to political factors regarding what weights should be given to what groups. Differential weights have the advantage of allocating relative degrees of importance to different groups.

Assigning of weights is influenced by the number and composition of the groups. For example, the more the groups are divided into subgroups, the more influence they will carry. However, this influence can be offset by the weights that are assigned to each group.

Assigning of weights ignores the problem that averaging across groups (whether using equal or differential weights) may not reflect the opinions of anyone. Presenting information about the average rating within each group, however, allows for further inspection of the areas of agreement and disagreement.

Degree of Agreement Among Highly Rated Goals and Associated Techniques Emphasizing Consensus and Compromise

The rationale underlying the three procedures described on the following pages is that the focus of the needs assessment process should primarily be on the highly rated objective areas. That is, the major concern of a needs assessment is to determine the objectives for which information should be collected and the objective areas for which programs should be developed or improved. Furthermore, this rationale specifies that viewpoints of different groups should be represented in determining the relative importance of these objectives without resorting to simply averaging across groups.

Within these procedures, you would assume therefore that it is better to focus attention on two types of objectives: (1) objectives receiving high ratings by almost every group and (2) objectives rated highly by one or two groups only.

Procedure 1: Degree of Agreement Among Highly Rated Objectives. The four steps in this procedure are described below.

Step a. Compute the average rating for each objective for each group in the usual manner. Care must be taken that all relevant groups are represented and that no segment of the raters is unduly fragmented or combined with other raters since this might influence the results.

Step b. Prepare a tabulation listing the highest rated objectives in each group. One rule of thumb for determining the number of objectives to list is that it should be somewhere between one-fifth of the total number of objectives rated and the total number of areas feasible to consider within the constraints of time and resources. (To keep this method simple and understandable to the layman, it is wise to reduce the number of objectives listed as the number of rating groups is increased.)

Step c. Compute the average rating for each objective and how much the ratings differ from one another across groups, i.e., degree of agreement among groups. Several techniques can be used to compute the degree of agreement. Which one to use depends on the number of groups, the number of ranking positions available (e.g., 3 vs 15), the statistical sophistication of the person doing the computations, and the sophistication of and acceptance by raters of the techniques (in some cases it is better to use simple although less precise procedures to gain acceptance). Since statistically sophisticated readers are knowledgeable about complex procedures for measuring degree of agreement (e.g., standard deviation of the mean ratings in each row), the remainder of this section focuses on simpler techniques.

In the case of only a few groups (four or fewer), you could easily compute the degree of agreement by summing the absolute differences between each average in each row. The absolute value of a number is the value not considering the sign (+ or -). See the example on the following page:

Objective Number	Parents	Teachers	Administrators	Index of Agreement
2	4.5	4.9	3.8	2.2

The sum of the absolute differences would be computed as follows:

(Parents) (Teachers)
4.5 - 4.9 = |.4|

(Parents) (Administrators)
4.5 - 3.8 = |.7|

(Teachers) (Administrators)
4.9 - 3.8 = |1.1|

Total Difference |2.2|

The smaller the difference between each group, the smaller the total and thus the larger the agreement. If all groups gave an objective the same rating, then the sum of the absolute differences would be zero.

In the case of several groups (five or more), a simple technique is to compute the percentage of times that all the ratings in a row fall within a certain range of scores such as class intervals of 0.5. For example, if the ratings of a particular objective for five different groups were as follows: 4.5, 4.3, 4.4, 4.1, and 4.9, it is apparent that 4 out of 5 (or 80%) of the average ratings fall within a cluster ranging between 4.1 and 4.5. The higher the percentage of ratings falling within any class interval, the higher the degree of agreement.

According to Procedure 1 described above, complete the example given on the following page, using the technique for determining agreement by summing absolute differences. Feedback will be provided at the end of Section H.

Example 5-1 TECHNIQUES FOR COMBINING RATINGS

Procedure 1: Degree of Agreement Among Highly Rated Objectives

Instructions for Procedure 1.

Step a. Prepare a list of the 10 objectives that were rated in the top 10 by one or more groups. This step has already been done for you in the tabulation below. Note that Objectives 1, 13, 17, 20, and 24 were not rated as being among the 10 highest for any group. This leaves 20 objectives to be considered.

Step b. Compute the average rating of each objective. This has been done for you in the tabulation below except for Objectives 2, 3, and 4. You are to compute the averages for the first three objectives and enter these figures in the appropriate places in the Average Rating column.

Step c. Compute the degree of agreement for each objective among groups. This has been done for you in the tabulation below except for Objectives 21, 22, 23, and 25. You are to compute the degree of agreement for these last four objectives and enter these figures in the appropriate places in the Index of Agreement column. (Note that the specific instructions for computing this index appear on pages 4 and 5 of Section H. Follow these instructions.) You may check your procedures by calculating this index for one of the objectives we have done for you.

Objective Number	Parents	Teachers	Administrators	Average Rating	Index of Agreement
2	4.2	2.7	2.7		3.0
3	2.7	4.2	1.2		6.0
4	2.4	1.0	3.8		5.6
5	2.9	4.3	1.5	2.9	5.6
6	4.5	3.0	3.1	3.5	3.0
7	3.0	1.5	4.5	3.0	6.0
8	4.3	5.0	2.0	3.8	6.0
9	3.0	4.5	1.5	3.0	6.0
10	4.0	2.5	2.5	3.0	3.0
11	5.0	3.4	3.6	4.0	3.2
12	1.5	3.0	3.0	2.5	3.0
14	1.2	2.5	2.7	2.1	3.0
15	1.0	3.9	2.5	2.5	5.8
16	5.0	3.0	3.8	3.9	4.0
18	4.0	3.7	2.7	3.4	2.6
19	2.0	3.5	1.7	2.4	3.6
21	1.0	4.8	2.5	2.8	
22	3.3	1.8	1.8	2.3	
23	3.1	3.7	3.5	3.4	
25	3.2	1.5	1.7	2.1	

GO ON TO THE NEXT PAGE

Step d. The results of the preceding example can now be inspected to ascertain those objectives with a high average rating from all groups and high degree of agreement among all groups. This inspection process can be simplified by separating the objectives into four categories as follows:

		Degree of Agreement	
		High	Low
Average Rating	High	Quadrant 1	Quadrant 3
	Low	Quadrant 2	Quadrant 4

High and low on each dimension can be determined by using the median or some other cutoff point. In the particular example you have been using, the median for average ratings is 2.9. The median for index of agreement is 3.6. Remember for this procedure that the smaller the difference between groups, the larger the agreement. Therefore, for the index of agreement, numbers below 3.6 mean a high index of agreement and those above 3.6 a low index of agreement.

Look at Objective 2 on the preceding page. It has a high average rating (3.2 is greater than the median 2.9) and a high index of agreement (3.0 is less than the median 3.6). Therefore, Objective 2 goes into Quadrant 1. Now look at Objective 3. It has a low average rating (2.7 is less than 2.9) and a low index of agreement (6.0 is greater than 3.6). Therefore, Objective 3 goes into Quadrant 4.

It is apparent that highly rated objective areas on which there is a high degree of agreement (Quadrant 1) should be ones of primary focus. The next highest priority cell is the low agreement, high average rating cell (Quadrant 3). Quadrant 2 is of third priority and Quadrant 4 of least importance.

The example on the following page will give you some practice in completing Step d of Procedure 1 (ascertaining into which category each objective falls.) Feedback will be provided at the end of Section H.

Example 5-2

Step d. Categorize the objectives in terms of both average rating and degree of agreement. This has been done for you for Objectives 2-7 and 21-25 in the tabulation below. You are to categorize the remaining objectives (numbers 8 through 19) in terms of rating and degree of agreement and place these objective numbers in the appropriate cells in the tabulation. Use the median point of the ratings and the indexes to determine what is "high" and what is "low."

The median for average ratings is 2.9.
The median for the index of agreement is 3.6.

Remember that the smaller the difference between groups the larger the agreement. Therefore, for the index of agreement, numbers below 3.6 means a high index of agreement.

		Degree of Agreement	
		High	Low
Average Rating	High	2, 6, 23	7
	Low	22, 25	3, 4, 5, 15, 21

When you have completed Example 5-2, go on to the next page for a discussion of Procedure 2.

Procedure 2: Highest Ratings by Each Group. Procedure 2 is similar to Procedure 1 but it is simpler and allows more emphasis on disparate viewpoints.

Step a. The initial step is the same as in Procedure 1 in that the highest objectives are listed for each group forming a composite set similar to that on page H-8. However, it is not necessary in this procedure to compute either the average rating for each objective or the degree of agreement.

Step b. The next step is to find the highest rank assigned by any group to each objective. The 10 highest rated objectives are to be listed for each group and assigned a value of 10 (highest) down to 1 (lowest). The final rank for the objective is the highest number that the objective received from any of the three groups. In other words, if Objective 22 received a 9 from teachers, a 7 from parents, and a 2 from administrators, its final rank is 9. If Objective 19 received a 2 from teachers, a 6 from parents, and a 10 from administrators, its final rank would be 10. There would, of course, be several objectives whose ratings would be the same.

This procedure ensures that the most important objectives of each group are recognized, but it ignores the fact that some groups may be strongly against certain objectives (for example, those that might deal with such controversial issues as sex education and religious training in school).

On the following three pages, examples will make Procedure 2 clearer. If you have any questions, raise your hand and the leader will assist you.

Example 5-3

TECHNIQUES FOR COMBINING RATINGS

Procedure 2: Highest Ratings by Each Group

Procedure 2 selects a predetermined number of objectives (e.g., 10) in such a way that the objectives most important to each group are represented in the final set.

Instructions for Procedure 2:

Step a. Prepare a list of the 10 objectives that were rated in the top 10 by one or more groups. This step has already been done for you. These objectives and the ratings they were given appear in the tabulation below. Note that Objectives 1, 13, 17, 20, and 24 were not rated as being among the 10 highest for any group. This leaves 20 objectives to be considered in determining the overall 10 highest.

MEAN RATINGS OF OBJECTIVES BY GROUPS

Objective Number	Parents	Teachers	Administrators
2	4.2	2.7	2.7
3	2.7	4.2	1.2
4	2.4	1.0	3.8
5	2.9	4.3	1.5
6	4.5	3.0	3.1
7	3.0	1.5	4.5
8	4.3	5.0	2.0
9	3.0	4.5	1.5
10	4.0	2.5	2.5
11	5.0	3.4	3.6
12	1.5	3.0	3.0
14	1.2	2.5	2.7
15	1.0	3.9	2.5
16	5.0	3.0	3.8
18	4.0	3.7	2.7
19	2.0	3.5	1.7
21	1.0	4.8	2.5
22	3.3	1.8	1.8
23	3.1	3.7	3.5
25	3.2	1.5	1.7

Step b. Determine the 10 highest rated objectives for each group. Enter the objective number of each of the 10 highest rated objectives by group in order from highest to lowest. Indicate the rank (10 = high; 1 = low) order of each objective. This has been done for the teacher and administrator groups in the tabulation on the next page. You will determine the 10 highest rated objectives and their ranks for parents and place these figures in the appropriate column below.

GO ON TO THE NEXT PAGE

Example 5-3 cont.

Note: Several objectives may have identical ratings. If two objectives are ranked eighth, assign both an 8 but assign a rank of 6 to the next objective.

Parents		Teachers		Administrators	
Objective No.	Rank	Objective No.	Rank	Objective No.	Rank
		8	10	7	10
		21	9	16	9
		9	8	4	9
		5	7	11	7
		3	6	23	6
		15	5	6	5
		18	4	12	4
		23	4	14	3
		19	2	2	3
		11	1	18	3

GO ON TO THE NEXT PAGE FOR STEP C

Example 5-4

Step c. List the ratings assigned to the objective for each group. The final rating for any objective is the highest number appearing in the row for that objective. In the tabulation below, the ratings assigned to the objectives for teachers and administrators have been entered for you. These ranks were obtained by transferring the ranks from the preceding tabulation. You can see that for Objective 8, parents rated it as 7, teachers as 10, and administrators as 0 since it was not one of their 10 highest. Thus, the final rating for Objective 8 is 10. You will list the ranks of the 10 highest rated objectives for parents, and then list the final ratings for all objectives.

RANK

Objective Number	Parents	Teachers	Administrators	Final Rank
2		--	3	
3		6	--	
4		--	9	
5		7	--	
6		--	5	
7		--	10	
8	7	10	--	10
9		8	--	
10		--	--	
11		1	7	
12		--	4	
14		--	3	
15		5	--	
16		--	9	
18		4	3	
19		2	--	
21		9	--	
22		--	--	
23		4	6	
25		--	--	

GO ON THE THE NEXT PAGE FOR STEP D

Example 5-5

Step d. Select the 10 highest rated objectives using the figures under the final rank column of Step c. Remember, as in Step b, objectives with the same final rating are tied. You will determine the other highest ranking objectives by entering their objective numbers in the spaces below. If objectives are tied for the same rating, be sure to place them in the same space and skip the spaces below to compensate.

Objective Number
7, 8, 11, 16
–
–
–
5

After you have completed the examples, turn to the next page for a discussion of Procedure 3.

Procedure 3: Compromise and Combination

Procedure 1 has the advantage of taking into consideration the degree of agreement on each objective as well as its average rating, but it is complex and still may not fully reflect disparate points of view.

Procedure 2, on the other hand, has the advantage of emphasizing each group's point of view and being relatively simple to compute. Its major limitation, however, is that it ignores information about the general consensus regarding the importance of each objective, i.e., the average rating assigned to an objective across all the groups.

One means of avoiding such problems is to strike a balance between the two methods. This new method uses Procedure 2 for selecting the first few objectives to be included in the total set (e.g., the first 6) and then uses Procedure 1 (or even the simple average across groups) to fill in the remaining slots. The advantage of this approach is that each group's most important objectives are included while the total set provides a good indication of the general consensus across groups.

An example of Procedure 3 is given on the following page.

TECHNIQUES FOR COMBINING RATINGS

Procedure 3: Compromise and Combination

Step a. Combining the information from Procedures 1 and 2 to achieve consensus on the 10 highest rated objectives. Select the first 6 objectives determined from Procedure 2: Highest Rating by Each Group. These six objectives appear in the appropriate spaces below. Then select the first four objectives determined from Procedure 1: Degree of Agreement Among Highly Rated Objectives. These four objectives appear in the appropriate spaces below.

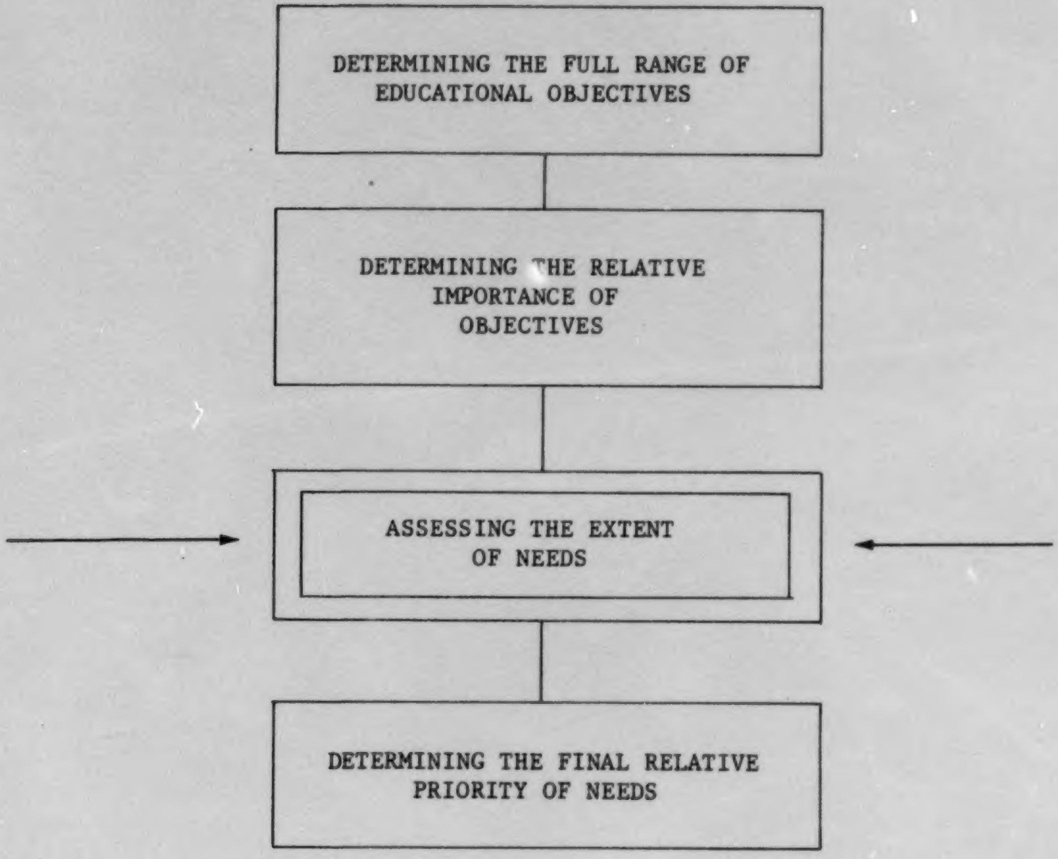
Procedure 2 Highest Rating	Procedure 1 Degree of Agreement
7	2
8	6
11	11
16	10
4	18
21	

You will note that although selection of four objectives from Procedure 1 is suggested, five have been selected. The reason for this is that if the same objective number appears from both methods, you should fill in the remaining slots by selecting additional objectives from Procedure 1. Objective 11 appeared in both methods. Therefore, Objective 18 was also selected from Procedure 1 to provide you with 10 different objectives.

Step b. By combining the data from both procedures, you arrive at the 10 highest rated objectives from both methods. These objective numbers appear in the spaces below.

Objective Number
7
8
11
16
4
21
2
6
10
18

NEEDS ASSESSMENT
STEPS


DETERMINING THE FULL RANGE OF EDUCATIONAL OBJECTIVES
DETERMINING THE RELATIVE IMPORTANCE OF OBJECTIVES
ASSESSING THE EXTENT OF NEEDS
DETERMINING THE FINAL RELATIVE PRIORITY OF NEEDS

OBJECTIVE INFORMATION SOURCES

Introduction

You have now completed two of the four basic steps in a needs assessment: (1) determining the full range of educational objectives that might be appropriate for the district and (2) determining the relative priorities of these objectives through a rating process. You are now ready for the next step in the needs assessment--determining the extent of the discrepancy between the desired and the actual student performance in those objective areas given the highest priority ratings. This step requires collecting information about present student performance on each important educational objective and comparing the results with a desired standard of performance.

Information about current student performance can be collected from a variety of sources ranging over a continuum of objectivity from carefully designed and researched tests to opinions from different groups about actual student performance. Section I deals with tests as a source of such information while Section J discusses attempts to collect data about student performance from more subjective sources. Section K focuses on establishing student standards.

Sources of Information

For purposes of this workshop, tests are classified in three categories: (1) standardized tests or norm-referenced tests (NRTs), (2) objective-referenced or criterion-referenced tests (CRTs), and (3) locally developed tests. The category 3 tests are generally teacher-made tests used in assessing highly specific instructional areas or subareas and are not appropriate to assessing districtwide student performance for a needs assessment. Few teachers have the resources to develop an effective test. Locally prepared tests generally have low reliability and unknown validity, making it difficult to interpret the scores obtained. Thus, their usefulness for a needs assessment is severely limited.

At the core of the difference between CRTs and NRTs is the purpose for which the test is developed. NRTs are intended to measure a broad area of instructionally relevant domains of knowledge and skills and student movement toward long term educational goals. The test score is conceived as a reflection of the amount of the general characteristic possessed by the individual as defined by the test content. The unit of interest is how much or how little of the measured characteristic the individual examinee demonstrates relative to other students taking the same test in the same way. The meaning of the individual score is enhanced as it is compared with scores of normative groups. Thus, the student is ranked according to scores that are usually earned by representative groups of students taking the test.

In contrast, CRTs are intended to measure well-defined, highly specific performance objectives. These objectives are explicitly stated in observable, behavioral terms. The test provides information concerning mastery or nonmastery of specific objectives by the student. Student performance is not compared with that of other students; rather the student is assessed as to whether he can or cannot perform certain well-defined tasks. The CRTs identify students who have or have not attained a certain standard of performance (i.e., they can add two-digit numbers with regrouping), while the NRTs identify the relative rankings of students to norms (i.e., their mathematics computation score is as high as or higher than 73 per cent of fifth graders).

Another major distinction between NRTs and CRTs concerns the use that is made of information produced by these tests. In situations that demand selection of a specified number of students (e.g., selection of the top 10 per cent of the examinees for admittance to special programs), comparison of student performances is necessary and the more traditional NRT information is used. On the other hand, when decisions must be made as to the instructional treatment to be given next to an individual student, the diagnostic information provided by CRTs concerning competencies mastered or not mastered is useful in tailoring instructional treatments to students so that overall objectives of the educational system can be reached.

Educational Tests

Thousands of standardized tests are available from U.S. test publishers. With the current emphasis on and interest in criterion-referenced measurement, most major test publishing concerns are also producing criterion-referenced tests. Tests for any one subject or goal area may vary widely as to emphasis, quality, students for which they are appropriate, usability, and costs. Test users must establish their purposes for measurement, define their measurement needs, and select an instrument that best fits their purposes and needs.

The evaluation team is faced with the difficult task of selecting the most appropriate test or tests for a particular purpose. This process requires a critical evaluation of candidate tests to arrive at those best suited for a needs assessment in a particular educational situation.

Many published tests have marked limitations resulting from lack of carefully conducted research, analyses, and instrument refinements. Data are often lacking to support the claims of the test. Approaches that an evaluation team might take in selecting appropriate tests are described on the following page.

The Test Manual. The principal source of information about the technical quality of a published test is the test manual. The test manual, in conjunction with the test book, should supply information sufficient to enable a qualified user to make intelligent judgments regarding the usefulness and interpretations of the tests in a particular situation. However, manuals are not always as useful as they should be or written as clearly as they might be and may mislead the untrained or uncritical reader.

Technical Standards. Concern with improving the quality of information about tests precipitated the establishment of committees to study this problem. Their efforts have resulted in the formulation of technical standards for tests and manuals that can be most useful in judging the quality of tests.* Although most of the technical standards deal with criteria for assuring high quality in standardized tests, there are constant revisions to include new developments in test construction such as CRTs. The *Standards* offer an excellent source of criteria for judging candidate tests that might be appropriate for use in the needs assessment within a given setting.

Test Reviews. Another source for identifying available tests and selecting among them is the test review series edited by O. K. Buros concerning published tests. *Tests in Print*† is a comprehensive bibliography of standardized tests and a master index to the first five *Mental Measurement Yearbooks* series by Buros. It gives the title of the test, a description of the different grade levels to which the test is appropriate, a brief description of the content, publication dates, author or authors, and publisher. Thus, it provides a means of identifying candidate tests for subject areas by grade levels that might be appropriate to a particular situation. It also provides a reference to critical test reviews that have been written concerning technical excellence of the tests. These test reviews are contained in the *Mental Measurement Yearbook* series. These test reviews are written by specialists whose experience and expertise are used to discuss and criticize the tests and their use. They also draw attention to any questionable claims made in the test manuals. These reviews can be helpful to an evaluation team in selecting appropriate tests to assess current student performance.

CSE Test Evaluation System. Another technique for selecting among competing tests is the method developed by the Center for the Study of Evaluation (CSE). In this system, standard evaluations of instru-

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*See *Standards for Educational and Psychological Tests and Manuals*. The American Psychological Association. Washington, D.C., 1966.

†*Tests in Print*, Edited by O. K. Buros. The Gryphon Press. Highland Park, New Jersey, 1961

ments available from test publishers are made. The tests are first categorized by grade level and by the area they test, and an evaluation team then rates the tests using the following criteria:

1. Measurement Validity
2. Examinee Appropriateness
3. Administrative Usability
4. Normed Technical Excellence

All tests are rated with the above criteria and in the same way, providing another means of determining which of the available tests is most appropriate for a particular circumstance. For a more detailed discussion of this system, see Appendix 1 on page K-9.

Test Development. The evaluation team may at times be unable to find an appropriate test for assessing student performance on a particular objective. Therefore, it may be necessary to develop a test designed to meet unusual testing requirements. Some test publishers and other companies have the capabilities and expertise to construct customized instruments designed and researched to meet requirements of a particular setting and accepted standards of educational and psychological tests.

GO ON TO SECTION J

SUBJECTIVE INFORMATION SOURCES

Introduction

Section I concerns published tests as a source of information about student performance. However, a variety of more subjective instruments and techniques can be used in a needs assessment. Such subjective sources provide useful data that can complement the information about the relationship of present student performance to desired standards within a school district. Subjective sources require careful interpretation and screening as do objective sources. Some subjective sources of information that might be considered in assessing student performance are described below.

Attitude Scales

Attitude scales contain specific questions that call for an individual to give his "opinion" about some entity that the evaluation team is trying to assess. These "opinions" are combined in different ways to obtain an index of group attitudes. Attitude scales are useful because they allow expression of intense attitudes since subjects can agree or strongly disagree with a statement. They are easy to develop and provide results with considerable variance. Although they are useful in behavioral research, they have a major weakness in that the variance of a rating scale often consists of response-set variance, which can be confused with the attitude variance. In such cases, it is impossible to determine whether there is a real difference in attitudes or whether the difference results from the way in which the scale has been constructed.

Interviews

Interviews can be used to gain information about performance that might otherwise not be obtained. Advantages of the interview are that it is adaptable to a wide variety of respondents, topics, and situations and it is uniquely suited to in-depth exploration of an issue. The unstructured interview is informal, allowing the interviewer room to probe, while the structured interview requires special wording and sequencing of questions. The structured interview should be used when information from different interviews must be as comparable as possible.

All interviewers and all interviews are slightly different, and there is no completely practical way to control or estimate the effect of these differences; thus, interview data are often difficult to summarize and interpret. Also, because interviews require considerable time, energy, and money, data are usually collected from only a small number of people. Furthermore, interviews require a high degree of skill in planning and execution.

Questionnaires

Questionnaires offer an economical way of gathering a large amount of data; they are particularly well adapted to sampling techniques. Also, anonymity is possible with questionnaires, which encourages candid answers.

You should note that unbiased or neutral phrasing of items in a questionnaire is difficult to achieve, particularly in controversial areas. Another problem is that people are rarely equally well informed about the issue on which information is to be gained. In general, the longer the questionnaire, the lower the return rate but the shorter the questionnaire, the smaller the amount of information. The choice is always difficult. Furthermore, generalizations about the data cannot be made unless a high rate of return is obtained from the representative groups.

Rating Scales and Checklists

Rating scales and checklists are particularly well adapted to improving the validity and reliability of on-site observation of actual behavior, since they alert the observer or rater to important areas of interest. However, there is a tendency for the observer to avoid extreme ratings, and the data are affected by the conscientiousness, severity, experience, and physical state of the rater. The description of what is to be rated is often vague, which lessens confidence in the results of the rating, since different raters may be rating different things.

Unobtrusive Measures

Certain often overlooked data sources can provide additional information to an evaluation team conducting a needs assessment. These data are collected through techniques known as unobtrusive measures. In these methods, the subject may not be aware that data are being gathered. The three basic types of unobtrusive measures are records, observations, and physical traces.*

Records are a good source of unobtrusive data because they are permanent and usually fairly well up to date. They are readily accessible (assuming that there are no legal problems) and the only costs of collection are clerical costs.

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*See E. J. Webb, D. T. Campbell, R. D. Schwartz, and L. Sechrest. *Unobtrusive Measures: Nonreactive Research in the Social Sciences.* Rand McNally, Chicago, 1966.

The disadvantages of records are that they are appropriate to only a limited number of objectives and they usually contain much more information than can be used, which requires selectivity. An example of the use of records as an unobtrusive measurement technique was the following: "Library withdrawals were used to demonstrate the effect of the introduction of television into a community. Fiction titles dropped, nonfiction titles were unaffected." (Webb et al., 1966.)

A second type of unobtrusive measurement is hidden observation. It is particularly valuable for obtaining data about attitudes, since it avoids stimulating subjects to work harder or answer in socially acceptable ways as they would if they knew they were being observed. The major disadvantage of this method is that it may offend people. An example of this type of observation would be: "Chinese jade dealers have used the pupil dilation of their customers as a measure of the client's interest in particular stones." (Webb et al., 1966.)

The third type of unobtrusive measure in which subjects are unaware of data being collected about them is called physical traces. It is helpful to discriminate between the two broad categories of physical evidence. The first is erosion, which measures the degree of wear on a material. An example would be: "The floor tiles around the hatching-chick exhibit at Chicago's Museum of Science and Industry must be replaced every six weeks. Tiles in other parts of the museum need not be replaced for years. The selective erosion of tiles, indexed by the replacement rate, is a measure of the relative popularity of exhibits." (Webb et al., 1966.) The second type of physical trace is accretion, which measures the degree of deposit of materials. For example: "One investigator wanted to learn the level of whiskey consumption in a town which was officially 'dry.' He did so by counting empty bottles in ashcans." (Webb et al., 1966.) Accretion and erosion are particularly valuable for obtaining data about attitudes unbiased by the subject's feelings that they are being measured. They are, also, generally inexpensive.

Using unobtrusive measures as a source of data collection in a needs assessment requires that the evaluation team be imaginative and creative enough to devise or recognize measures appropriate to the purposes of the needs assessment.

Community Groups

Many community groups have important opinions and valuable information, which can be collected through attendance at meetings, copies of minutes, publications, reports, interviews with officers, and the like. Such groups are usually sincere and genuinely involved in and concerned with school and community problems. However, these groups often exist to prove a point of view and their evidence may be anecdotal and require confirmation before it can be used.

Rarely is there difficulty in collecting enough information about what people think the schools are and are not achieving. In fact, the problem is usually that there is too much information. The problem is to obtain reasonably accurate and comprehensive information that does not jeopardize the ability to analyze, interpret, and summarize it by the time that a decision must be reached.

GO ON TO SECTION K

SETTING STANDARDS OF PERFORMANCE

Introduction

Setting standards for expected or desired performance for highly rated educational objectives is neither an easy nor an entirely objective exercise. No simple equation or formula can be used. In fact, many procedures for setting standards should be considered by a district. The measurement procedure that best fits the type of objectives and the intent of the project administrators should be considered.

District staff members should realize that attempts to establish standards, although based on all the data available, are merely a series of approximations. The first effort in establishing standards may not provide definitive criteria, but the process of setting and monitoring progress toward attainment of standards should provide viable guidelines for assessing educational systems.

There are basically two types of areas to which standards of performance must be assigned. These two areas are the academic educational objective and the subjective attitudinal or motivational educational objective. These areas require different approaches to setting standards.

A starting point for setting standards might be the establishment of expected performance levels based on projections of standards related to similar populations. For example, assume that an expected performance of a 4.2 grade equivalency for fifth grade students on a standardized reading test has been generated by referring to the performance of similar student populations. However, the performance for the sample of student fifth graders you are concerned with is a grade equivalency of 3.8. Thus, the 4.2 grade equivalency is an immediate and reasonable objective to strive for. The long range standard of performance should be set beyond the 4.2 standard to a level that could be expected by referring to other variables.

Setting Academic Standards

A valuable approach to setting academic standards is a careful examination of longitudinal data. Trend analysis is a statistical technique used by evaluators to study longitudinal information. This technique can provide information about consistencies or changes in performance over time. If this analysis indicates that student performance relative to national or regional norms has declined each year for a five-year period, a realistic standard of performance for the district might be to arrest this downward trend during the first year of the project and to reverse the direction to an upward trend during the second and third years.

An additional input to the process of setting standards requires an examination of predictor variables: How well should this group of students do based upon their age, their health, their educational and environmental background, and the language spoken in their homes? Factors such as these are known to contribute to a student's level of readiness to learn and to his total educational performance. Considering these predictor variables and comparing levels of achievement with those of groups of students who have similar characteristics can be revealing. When the performance of a group of students is compared with the performances of groups with similar patterns of experience, strengths and weaknessess of the group under study become apparent. Examples of two school profile questionnaires are provided in Tables 1 and 2 to show the types of variables that have been shown to affect expected levels of performance. Table 1 is a sample of a questionnaire that provides data used in a sophisticated statistical procedure called multiple regression analysis to predict levels of academic performance. Table 2 is an approach developed at the Center for the Study of Evaluation (CSE) that allows an administrator to develop a profile of his school. Using this profile, the administrator can then correct percentile ranks for his sample of students according to the adjustment figures shown in Table 3.

Table 1

SCHOOL CHARACTERISTICS QUESTIONNAIRE

Principal's Name ____

School Name ______________________________ Area Code/Phone No. ___/___

School Address ______________________________________ ZIP Code _____

1. How many students are enrolled in this school at each of the following levels?

K __________
1 __________
2 __________
3 __________
4 __________
5 __________
6 __________
7 __________
8 __________
9 __________
10 __________
11 __________
12 __________

2. About what percentage of the students who attended this school last year are no longer attending this school? (Do not count those who have moved because of graduation or those who are being bused to other schools.)

_____%

3. Which of the following categories best describes the neighborhood served by this school?

_____a. Rural area
_____b. Residential suburb
_____c. Industrial suburb
_____d. Small town (5,000 or less)
_____e. City of 5,000 to 50,000
_____f. Residential area of a larger city (50,000 or more)
_____g. Inner part of a larger city (50,000 or more)

4. About what percentage of students in this school have mothers who are employed outside the home?

_____%

5. About what percentage of students in this school are living in homes in which there is only one parent?

_____%

6. About what percentage of students in this school speak a language other than English outside school or come from homes in which a language other than English is spoken most of the time?

_____%

7. About what percentage of students served by this school fall into each of the categories listed below? (The total should equal 100%.)

a. Children of professionals and managers (physicians, lawyers, engineers, executives) _____%

b. Children of white collar workers other than those in (a) above (proprietors, salesmen, clerks) _____%

c. Children of skilled workers (electricians, carpenters, repairmen) _____%

d. Children of unskilled workers (laborers, janitors, dishwashers) _____%

Total 100 %

8. What is the total district enrollment?

____

9. What is the number of grades in your school district?

____

10. Is your district publicly or privately funded?

_____Publicly _____Privately

11. In which geographic area is your school district located?

_____New England
_____Mid-Atlantic States
_____Great Lakes (Midwest)
_____Plains States
_____South (Southeast)
_____Southwest
_____West

Table 2

SCHOOL PROFILE

a. About what percentage of the pupils served by your school fall into each of the categories below? (The total should equal 100%.)

Children of professionals (doctors, lawyers, engineers), managers and executives, or white-collar workers (proprietors, salesmen, clerks)	______ per cent
Children of skilled workers (electricians, carpenters, repairmen, factory workers) or unskilled workers (laborers, janitors, dishwashers)	______ per cent

○ *If the first entry is equal to or greater than 30%, put a "1" in the circle at the left; otherwise put a "0" in the circle.*

b. About what percentage of the students in your school are white?
______ per cent

○ *If your answer is 90% or more, put a "1" in the circle at the left; otherwise put a "0" in the circle.*

c. ○ If your school is located in California, Oregon, Washington, Minnesota, Wisconsin, Illinois, Indiana, Michigan, Ohio, Pennsylvania, New York, New Jersey, Delaware, Connecticut, Rhode Island, or Massachusetts, put a "1" in the circle at the left; otherwise put a "0" in the circle.

d. About what percentage of the students who attended your school last year are no longer attending your school? (Do not count those who have graduated or are being bused to other schools.) ______ per cent

○ *If your answer is 4% or less, put a "1" in the circle at the left; otherwise put a "0" in the circle.*

e. About what percentage of the students in your school speak a language other than English outside of school or come from homes in which a language other than English is spoken most of the time? ______ per cent

○ *If your answer is 2% or less, put a "1" in the circle at the left; otherwise put a "0" in the circle.*

f. Are schools' teachers willing to initiate new educational programs (e.g., team teaching, new curricula, ungraded classrooms, tracking, resource rooms)?

○ *If your answer is "yes," put a "1" in the circle at the left; otherwise put a "0" in the circle.*

The numbers, in order, written in the circles above are __ __ __ __ __ __.
This is your school's profile.

Table 3

CORRECTION FACTORS TO ADD (+) OR SUBTRACT (-) TO OBTAIN DIFFERENTIATED SCHOOL NORMS

Profile	First Grade	Third Grade	Fifth Grade	Sixth Grade
000000	-39	-36	-39	-41
000001	-33	-27	-37	-35
000010	-33	-33	-31	-35
000011	-26	-22	-29	-27
000100	-34	-32	-36	-34
000101	-27	-22	-34	-26
000110	-27	-28	-27	-27
000111	-19	-16	-25	-16
001000	-29	-25	-28	-33
001001	-21	-12	-25	-25
001010	-21	-20	-17	-25
001011	-12	-06	-14	-15
001100	-22	-19	-23	-24
001101	-14	-06	-21	-14
001110	-13	-14	-11	-14
001111	-04	00	-09	-02
010000	-29	-28	-28	-32
010001	-22	-16	-26	-23
010010	-21	-23	-17	-24
010011	-13	-10	-15	-13
010100	-23	-23	-23	-23
010101	-14	-09	-21	-12
010110	-14	-18	-12	-12
010111	-05	-04	-09	-01
011000	-16	-13	-13	-21
011001	-06	+01	-10	-10
011010	-06	-08	00	-11
011011	+03	+07	+02	+01
011100	-08	-07	-07	-10
011101	+02	+07	-04	+02
011110	+02	-02	+06	+02
011111	+11	+13	+08	+13
100000	-15	-10	-17	-19
100001	-06	+04	-15	-08
100010	-06	-05	-05	-09
100011	-04	+10	-02	+03
100100	-08	-04	-12	-08
100101	+02	+10	-09	+04
100110	+02	+02	+01	+04
100111	+11	+16	+03	+15
101000	00	+06	00	-06
101001	+10	+20	+03	+06

The profile approach is still being refined and it should be used only for the standardized tests on which CSE has completed the MEAN analysis described in Section I of your notebook. Complete tables for correction and further descriptive information regarding the process should be requested from CSE at Los Angeles.

A third approach that can be used to set standards requires obtaining a consensus. Parents, teachers, and administrators all have expectations for students. A consensus of those expectations should provide realistic standards if longitudinal data are examined concurrently. Ranking and averaging procedures similar to those used in selecting objectives can be used to arrive at a consensus.

Setting Nonacademic Standards

Nonacademic objectives can range from a study of student or teacher attitudes to an increased number of books checked from the school library to increased parent involvement in the school. The objectives themselves must be evaluated in a more subjective, less standardized way; therefore, it is reasonable to set the standards for performance in a more subjective way. A certain element of opinion or judgment is entailed in assessing attitudes. This subjective influence should not be ignored, and the evaluation team should not avoid setting standards simply because no standardized measures are available. Keep in mind that the intent of the project is not to set and meet exact standards, but rather to change behavior. To assess the extent to which behavior has been changed, you must ascertain what the behavior is now, decide what you want it to be, and then evaluate the behavior at some future point in time after appropriate steps have been taken to change it.

There are many means of examining behavior. For example, if an educational objective of your project is to increase the extent of individualized instruction by elementary reading teachers, you must know how much and what kind of individualization is now being done. Teacher and student questionnaires, interviews, resource center records, and classroom observations can provide information. For example, assume that in one elementary school in the Rockpoint District four teachers work with four or more groups during reading period, two work with two groups, and three work with the total class. Only three of the teachers have checked out materials from the resource center for use with individual students or special groups. By consensus of school administrators, parents, and teachers, a desired standard of behavior might be that each reading teacher work with a minimum of three reading groups and that each teacher use the resource center as a source of special purpose materials. In this example, the setting of standards evolves directly from an evaluation of existing teacher behavior.

In much the same way, student attitudes must be evaluated before standards for improvement can be set. Assume that an objective of the Rockpoint evaluation project required that student attitudes toward nonacademic classes be changed to the extent that they would consider these classes to be contributory and relevant to their total school experience. Before a standard for improvement is set, a measure of present attitudes must be attempted. Interviews and questionnaires designed to assess the attitudes of students must be completed before the evaluation team can establish a level of attitudinal change that can be considered a desired standard.

The project director must organize and summarize all data required by the group assigned the task of setting standards. He or she should be assured that members of the group understand and are able to interpret the data provided. In general, however, he should remain an objective observer during the standards-setting process. The group brought together to set standards should not consider its task completed when initital standards have been set. This is a new experience for most districts, and standards should be reexamined periodically.

If results from ongoing implementation evaluation indicate that the project is going as planned and data from the progress evaluation indicate that students' performance is changing, it is time to reconsider the discrepancies between existing and desired standards. If wide discrepancies still exist, the standards set may be unrealistic within the resource constraints of the project. This is not to suggest that standards of improvement should be low or trivial, but that standard-setting should be an ongoing process conducted in phases and planned to encompass long term goals for the district.

If you finish early, you may want to reread parts of the previous three sections; the more complete description of the CSE Model for Evaluating Tests in Appendix 1, which begins on the following page; or Appendix 2, which gives additional information on various measurement instruments. However, it is not necessary for you to read these pages during the workshop to complete the exercise on information sources and setting standards.

Appendix 1
CSE TEST EVALUATION PROCEDURE

In the CSE system for evaluating published tests, the four major criteria mentioned earlier were assigned arbitrary weights as discussed below.

Measurement Validity (0 to 15 Points for Grade)

1. Does the test appear to measure the specific educational objective? Examination of instructions and items with psychological insight and consideration of reported construct-validation research led to a subjective rating from 0 to 10 points.

2. Is there direct or indirect evidence for predictive or concurrent validity? Examination of technical and administration manuals for supportive research on the test led to a subjective judgment on a scale from 0 to 5 points. No attempt was made to search the research literature for additional or more recent supportive findings.

Examinee Appropriateness (0 to 15 Points for Grade)

1. Is the comprehension level correct for the age and educational level to which the test is directed? Examination of the instrument that the examinee sees or hears in terms of comprehension, both of items and instructions, led to two subjective judgments of 0 to 4 points each.

2. Is the test printed and organized for ease of the examinees or is taking the test a test in itself? Examination of the test's page format in terms of effective use of Gestalt visual principles resulted in a subjective rating from 0 to 2 points, and appropriateness of pacing in a rating from 0 to 1 point.

3. Is the response recording procedure simple and direct for the examinee? The rating is from 0 to 2 points.

Administrative Usability (0 to 15 Points for Grade)

1. Is the test easily and conveniently administered? Administration of the test from individual situations to small groups to large groups resulted in credit of 0 to 2 points. The need for training the test administrators was credited 1 point if school staff were sufficient and 0 points if a psychometrician was needed. Tests needing more than 43 minutes were credited 0 points; tests needing less time, 1 point.

2. Can the test be easily and reliably scored? Simple, objective scoring that can be done by the administrator or a scoring service received 2 points, more difficult but objective scoring earned 1 point, and subjective scoring received 0 points.

3. Is the score interpretation simple, through use of clear and adequate norms and descriptions? If the norm range is broad, 1 point is credited; if restricted, 0 points. Common and simply interpreted scoring systems receive 1 point, while uncommon or abstruse systems receive 0 points. If conversion from raw to normed scores is clear and simple with graphs or tables, 2 points are credited. Simple, but confusingly presented conversions receive 1 point; complicated conversions receive 0 points. One point is credited for national and well-sampled normative groups, and 0 points are credited for normative samples that are local, outdated, or poorly sampled.

4. What qualifications must the score interpreter have? If school staff can interpret the scores accurately, 1 point is earned; if a psychometrician is necessary for accurate interpretation, 0 points are credited.

5. Can decisions be made or aided on the basis of the scores? Tests with manuals that provide tables or charts for educational decision-making were credited with 3 points. If the claim is made and it appears that decisions can be made on the basis of the scores, 2 points are earned. The possibility or implication of decision aiding earned a test 1 point; the doubtful nature of a test's decision-making potential earned it 0 points.

Normed Technical Excellence (0 to 15 Points for Grade)

1. Is the test reliable? Three reliability ratings were made; one each for stability (test-retest), internal-consistency (Kuder-Richardson, alpha, split-half, or odd-even), and alternate-form reliabilities. Points were assigned according to the size of the reported reliability coefficients, computed from a specific, limited age group. An appropriate coefficient of .90 or more earned 3 points; .80 to .90 earned 2 points; .70 to .80 earned 1 point; and less than .70 earned 0 points.

2. Were normed scores obtained under replicable conditions? If so, 1 point was earned; if not, 0 points were earned.

3. Does the test have an adequate range of coverage? Test score distributions with more than adequate ranges received 3 points, and distributions with an adequate floor and ceiling for the specific group received 2 points. Whenever examinees appeared to have reached the floor or ceiling or where there was evidence

of score truncation, 1 point was assigned. If no information was given to make an evaluation or even to extrapolate one from centile conversion tables, 0 points were assigned.

4. Are the scores well-graduated, interindividual comparison scores? Scores that are well graduated received 2 points. Scores that are well graduated, but perhaps not easily understood, or poorly graduated, but easily used, were credited with 1 point. Scores that are poorly graduated and poorly obtained, or are poorly graduated and difficult to understand were given 0 points.

Ratings

After each test had been rated the overall ratings were determined from total points as follows:

- "G" (Good; 12-15 points). The test meets the criteria very well. Little improvement appears necessary for its immediate utilization. The Center for the Study of Evaluation would endorse such a measure or employ it in its own assessment efforts.
- "F" (Fair; 8-11 points). The instrument is probably among the better tests available, but it does not meet the criteria desired. Alterations would probably render the test a candidate for "G" status. If no better qualified measure were available, CSE would employ an "F" measure, but would interpret results for the "F" criteria more cautiously.
- "P" (Poor; 0-7 points). The instrument does not meet the criteria; it is clearly unsatisfactory. Rather than employ such a measure for assessment, CSE would seek a better device or attempt to develop one. A sample of the MEAN form for summarizing the information about tests is available from the Center for the Study of Evaluation, University of California at Los Angeles, Los Angeles, California.

At least two psychometrically trained educational researchers independently evaluated each test or subscale, published or normed. The evaluation personnel included one psychometrician with several years of experience in developing, norming, and reviewing tests, a graduate assistant with a master's degree in statistics, one with a master's degree in educational counseling and guidance, and one with several years of teaching experience at various elementary grade levels. This team brought relevant competencies to all of the tests within the purview of the evaluation program. Each measure was independently placed in an educational goal category and then rated according to the MEAN system by each rater. (MEAN is an acronym for the four major criteria of the evaluation system.) A third and sometimes a fourth trained researcher then adjudicated the goal assignment and each of the MEAN ratings.

Each measure then earned four letter grades by the MEAN system. The four-letter combination serves as the Center's official evaluation of the test. For example: ACME Etiquette Test (GFPF). This grade-point conversion will, on the basis of probability, restrict the number of "Gs" earned, but it was decided that such a situation is not unrealistic.

Utilizing the MEAN system described in detail above, number points were assigned in the manner above. Note that not only are the criteria listed in the order of importance to the Center for the Study of Evaluation, but also that the points possible for each aspect of any criterion reflect the importance placed on that aspect by the project. If your goals do not coincide with those of the CSE, the MEAN evaluations should be interpreted with different emphasis.

Appendix 2
SUMMARY AND SUPPLEMENTAL INFORMATION CONCERNING MEASUREMENT INSTRUMENTS

Appendix 2 presents a summary of the advantages and disadvantages of measurement instruments discussed in Sections I and J. Information is presented on the merits and drawbacks of different kinds of test items and inventories.

Objective Measures--Advantages

1. Objective measures usually contain many questions that cover a wide range of achievement, thereby increasing the probability of high instrument validity.

2. They usually provide a better and broader sample of questions than more subjective measures.

3. They do not require subjective scoring, and since different scorers will assign the same value, the reliability of the instruments is increased.

Objective Measures--Disadvantages

1. Objective measures do not allow students to express their thoughts freely as in an essay test.

2. They can create a problem of guessing, which influences the scores students obtain and affects reliability. This is a particularly crucial problem for the True-False type of question.

3. Often they relate only to objectives that are at the lower level of learning taxonomy.

4. They are difficult to construct and require considerable time, energy, and money.

5. They usually cover a limited range of objectives (if the tests are standardized) and do not necessarily pertain to a program's specific objectives unless they have been customized to that program.

Multiple-Choice Items--Advantages

1. Multiple-choice items have a wide adaptability to many different types of material.

2. They are less subject to guessing than any other type of objective item.
3. When constructed carefully, they can test for almost all levels of learning, from recognition to application.
4. They provide an easy system of scoring.
5. They increase reliability since scoring is objective.

Multiple-Choice Items--Disadvantages

1. Multiple-choice items are difficult to prepare, particularly in writing an adequate number of effective distractors.
2. It is difficult to judge the amount of time that will be required by students to complete the test.
3. These items often place undue emphasis on isolated pieces of information, which gives an advantage to students who have good memories.

Matching Test Items--Advantages

1. Matching test items are adapted to testing who, what, when, and where types of information, or testing the ability to name and identify.
2. They are relatively easy and relatively inexpensive to construct.

Matching Test Items--Disadvantages

1. Matching test items often include clues to the correct response.
2. They are not well adapted to the measurement of higher order objectives.
3. They are time-consuming for examinees to complete.

True-False Items--Advantages

1. True-false items are easy to construct.
2. They can apply to a wide range of subject matter.
3. They provide for a large sampling of knowledge within a relatively small space.

4. They cover more items in the same time than any other type of test and generally have high reliability.

5. They provide a simple and direct test of the student's knowledge.

True-False Items--Disadvantages

1. True-false items are susceptible to chance error resulting from guessing.

2. It is difficult to prepare statements that measure more than simple factual information.

3. Items are often ambiguous, which may mislead the students and increase the possibility of guessing.

4. These items do not provide explicit alternatives in relation to which the relative truth or falsity of the item can be judged.

Personality Inventories--Advantages

1. Personality inventories are usually quick and easy to administer.

2. They can assess many different, nonintellective traits rapidly.

3. They can measure some types of behavior that cannot be assessed in any other way.

Personality Inventories--Disadvantages

1. Personality inventories are transparent; that is, a subject often knows the purpose of the test and attempts to present himself favorably.

2. Personality inventories are difficult to construct and the scales do not refer to concrete behavior.

3. Interpretation of their results must be done by experts.

4. Items are often ambiguous, and it is often difficult to verify what behavior the questions are measuring.

5. Personality inventories are expensive to develop and interpret.

Interest Inventories--Advantages

1. Interest inventories compare examinee responses with those of appropriate reference groups in identifying interest profiles.

2. They are more reliable and more penetrating than self-estimate reports.

3. They can provide information regarding adjustment and personality of the examinee.

Interest Inventories--Disadvantages

1. Interest inventory scores are usually not stable for young children.

2. The scores may not define a vocational choice with enough specificity to be useful for guidance.

3. Interest inventories have negligible value for predicting success in vocational training.

4. Expert interpretation of the data is required.

5. They are inconvenient and time-consuming to score.

Essay Tests--Advantages

1. Essay tests are easy to prepare.

2. They are applicable to almost all subject matter.

3. They are relatively inexpensive to develop.

4. They are more feasible for assessing higher level mental processes such as analysis, synthesis, and evaluation.

Essay Tests--Disadvantages

1. The number of questions in essay tests is generally too small, thus they provide a limited sampling of achievement. This can lessen the validity of the instrument.

2. The questions may ask for lengthy development so that students spend most of their time thinking rather than writing.

3. Style, spelling, and general writing ability tend to influence the score that a student receives.

4. The scoring is subjective and thus scores are unreliable.
5. Scoring essay tests usually requires time and most often is tedious for the examiner.

Completion Tests--Advantages

1. Completion tests have wide applicability.
2. They have the advantage of eliminating guessing.
3. They can cover a large amount of material in a relatively limited space.
4. They do not require a high level of expertise in construction.
5. Reliability is generally higher than for essay tests.

Completion Tests--Disadvantages

1. Completion tests often measure rote memory.
2. Scoring is laborious.
3. There is subjectivity in the scoring contributing to their general lower reliability.

Short Answer Tests--Advantages

1. They are the most familiar and natural type of measure.
2. They are very valuable in mathematics and the sciences.
3. They are relatively easy to construct.
4. A short time is required to record the answers.
5. Reliability of scoring is very high.

Short Answer Tests--Disadvantages

1. They usually measure high factual knowledge.
2. The scoring is laborious and is not always entirely objective.
3. They are only suitable to a restricted range of mental processes.

Summated Attitude Scales--Advantages

1. The universe of items in summated attitude scales is conceived to be a set of items of equal "attitude values."
2. They allow for intense expression of attitudes since subjects can either agree or strongly disagree.
3. They provide the most significant variance results.
4. They are useful in behavioral research.
5. They are the easiest kind of attitude scales to develop.

Summated Attitude Scales--Disadvantages

1. Their major weakness is that the variance of a summated rating scale often consists of response-set variance and can confound the attitude variance.

Interviews--Advantages

1. Interviews are adaptable to a wide variety of respondents, topics, and situations.
2. Interviews are uniquely suited to in-depth exploration of an issue. The unstructured interview is informal and allows the interviewer to pursue interesting answers and to probe below the surface.
3. The structured interview, which provides a detailed guide to topics and required wording and sequence of questions, can be used when information from interviews must be as comparable as possible.

Interviews--Disadvantages

1. Interviewers and interviews are all different, and there is no completely practical way to control or estimate the effect of these differences.
2. Interviews require a considerable amount of time, energy, and money. Thus, data are usually collected only from a small number of people.
3. Interviews require a high degree of skill in planning and execution.

4. Interview data are often difficult to summarize and interpret.

Questionnaires--Advantages

1. Questionnaires are an economical means of gathering a large amount of data, which can be collected by mail.
2. They are particularly well adapted to sampling techniques. The sampling plan, rather than limitations of the process itself, is the prime factor in the sampling decision.
3. Anonymity is possible, which encourages candid answers.

Questionnaires--Disadvantages

1. Unbiased or neutral phrasing of items in questionnaires is difficult to achieve, particularly in controversial areas.
2. People are rarely equally well informed about a problem.
3. Questions must be kept simple, which limits the quality of the information obtained.
4. The longer the questionnaire, the lower the return rate. The shorter the questionnaire, the smaller the amount of information. The choice is difficult to make.
5. Valid generalizations cannot be made unless a high rate of return is obtained.

Rating Scales and Checklists--Advantages

1. Rating scales and checklists are particularly well adapted to improving the validity and reliability of on-site observation of actual behavior.
2. They can easily be reused, thus providing data for interpreting change.
3. They can be used in group situations.

Rating Scales and Checklists--Disadvantages

1. Rating scales and checklists are limited to behavior and are difficult to use in measuring attitudes or achievement.
2. There is a tendency to avoid extreme ratings.

3. The data are affected by the conscientiousness, severity, experience, and physical state of the rater, which will be different both among raters and for a single rater over time.
4. The description of what is to be rated is often vague.

Unobtrusive Measures (Records)--Advantages

1. Records are permanent and usually fairly well up to date.
2. The only collection costs are clerical costs.
3. They are readily accessible (assuming that there are no legal problems).

Unobtrusive Measures (Records)--Disadvantages

1. Records are appropriate only to a limited number of objectives.
2. They usually contain more information than can be used, which requires selectivity.

Unobtrusive Measures (Unobtrusive Observation)--Advantages

1. Unobtrusive observation is particularly valuable for obtaining data about attitudes.
2. It is appropriate in group situations.
3. It avoids stimulating students to work harder as they would if they knew they were being observed.
4. See also comments on rating scales and checklists.

Unobtrusive Measure (Unobtrusive Observation)--Disadvantages

1. In some circumstances, unobtrusive observation resembles spying and offends people.
2. See comments on rating scales and checklists.

Unobtrusive Measures (Physical Traces)--Advantages

1. Physical traces are particularly valuable for obtaining data about attitudes unbiased by student feelings that they are being measured.

2. They are generally inexpensive.

Unobtrusive Measures (Physical Traces)--Disadvantages

1. Physical traces require more imagination to devise than most measures.

2. They are vulnerable to sampling biases.

ESTABLISHING PRIORITIES FOR DISCREPANCIES

The third of the four steps necessary for conducting a complete needs assessment is to determine the size of the discrepancy between desired and actual student performance on those objectives selected as important. The larger this discrepancy, the greater the concern is for improving performance of students on that particular objective. For example, if a selected educational objective states that the median score for sixth-grade students in a particular school district be equal to the 60th percentile on a nationally normed mathematics test, you would not be overly concerned if actual performance within the district reached the 58th percentile. However, if actual performance reached only the 45th percentile, you might be justified in saying that the discrepancy was large enough for concern.

A discrepancy implies a comparison; for a needs assessment this comparison is between a desired standard of performance and the actual level of performance. Establishing a realistic standard is based on the objective that the student is intended to achieve, the way that performance on that objective is assessed, and the characteristics of the students participating in the needs assessment. Theoretically, it is a simple matter to establish a criterion or standard for each objective and then to select appropriate measures (tests and others) to determine the size of the discrepancy within the particular setting. In practice, however, establishing the standard of performance is related to the way in which it is measured (e.g., the standard might be a school median at the 60th percentile on a nationally normed test or that students gave 24 positive responses out of 50 total responses to a districtwide questionnaire). Because of this relationship between the standard and the measurement instrument, it may not be possible to establish a standard until data have been collected or until a method for assessing student performance on an objective has been determined. Thus, determining how large the discrepancies are between desired and actual performance is difficult and subjective, requiring careful judgment on the part of those conducting a needs assessment. The vital part of the procedure is the realistic setting of standards of performance for each objective and assuming acceptable ranges of deviation for classifying discrepancies.

In the example presented above, the level of performance desired was the 60th percentile. A variance of five percentile points (55th to 60th percentile) might be considered unimportant. An aggregate range of the 45th to 54th percentile points might be considered a small discrepancy, a range of the 35th to the 44th percentile might be considered a medium discrepancy, and a range of the 25th to the 34th percentile points might be considered a large discrepancy. In other cases, the acceptable range of a small, medium or large discrepancy might be considerably smaller.

Estimating the Size of the Discrepancies Indicated by Each Source of Information

Varying sources of information about a particular objective will not be comparable unless they are transformed so that they can be rated by the same rating system. It is necessary, therefore, to establish ranges of scores or reported results that will constitute the numerical rating assigned to the size of the discrepancy. Unfortunately, there is no fully objective way to do this. The experience and judgment of the evaluators will always be a factor in decisions that are made. To compare discrepancies from different sources of information, it is desirable to assign a numerical value to each set of information about each objective assessed. A convenient scale describing these numerical values could be:

3	large discrepancy
2	medium discrepancy
1	small discrepancy
-1	equals or exceeds desired performance to a small degree
-2	exceeds desired performance to a moderate degree
-3	greatly exceeds desired performance.

For each educational objective, a numerical value of 3 (a large discrepancy) to -3 (exceeds desired performance to a great degree) should be assigned based on the extent to which actual performance varies from desired performance.

It is often not sufficient to deal with the overall average performance of a school or district. For example, if there is particular interest in the performance of minority groups, it might be necessary to make discrepancy estimates for different subgroups within the school population. If this is the case, these same groups should also have been given an opportunity to rate the importance of different objectives. The information from subgroups of interest can then be treated in the same manner as that from the entire school population.

Estimating the Quality of Each Source

As discussed earlier, information sources will vary considerably in their reliability, validity, and comprehensiveness. Some of the factors that should enter into a judgment of the quality of the information from a particular source are:

1. Comprehensiveness: Is the information complete?

2. Relevance: Is the information provided that which is actually needed?

3. Validity: Is the information likely to be accurate? For example, scores may be obtained from a mathematics reasoning test, but study of the test itself may suggest that it is little more than a vocabulary test.

Judgment as to the quality of a particular source of information will be easier to exercise if a number can be assigned on the basis of such factors as those listed above. The number chosen is subjective, but the process will help an individual or a team to be more consistent in comparing different types of information. The number assigned should indicate the extent to which you trust a particular source of information. A workable scale might resemble the one listed below.

3 A good source of information, such as a respected, nationally normed, standardized test or the judgment of an expert with little reason to be biased in the particular circumstance.

2 A fair source of information, such as less reliable nonvalidated tests, the report of a committee of parents, or the judgment of several teachers.

1 A poor source of information, such as the opinions of laymen expressed in letters or anecdotal evidence from conversation, speeches, and so forth.

The score given to a source of information depends on the definitions of the scale values and the class to which it is assigned. It is important that you do not judge the quality of a source on the basis of the discrepancy reported by the source.

Combining the Estimates into a Final Judgment of the Discrepancy

An important advantage of assigned numerical values is that the final judgment can be made mechanically, thus helping to reduce one source of subjectivity in reaching a decision. The technique is simply to obtain an average weighted discrepancy according to the quality of the information. This process is illustrated by the example given in the tabulation on the next page for an oral reading objective.

Source of Information	Size of Discrepancy	Quality of Source	Weighted Discrepancy
1. Teacher-made test	2	2	4
2. Nationally normed test	1	3	3
3. Expert opinion	1	3	3
4. Committee report	-1	2	-2
5. Teacher "bull-session"	2	1	2
Total			10

Average Weighted Discrepancy 10 ÷ 5 = 2

For this educational objective, there are five sources of information. For sources 1 and 5 the size of the discrepancy was within range of a medium discrepancy (rating of 2). Note, however, that the quality of the information sources, a teacher-made test and the report of a conversation among teachers, is not equal and, when it is multiplied by the discrepancy rating to obtain the weighted discrepancy, it shows the two sources to be unequal.

In this case, total weighted discrepancy for the oral reading objective is 10, taking into account the sign of the numbers. If many objectives are to be considered, it is necessary to obtain an average weighted discrepancy value, since there may be varying numbers of sources of information for each objective. In this example, the number of sources is 5, so the average weighted discrepancy value is 2. The higher this value, the greater the discrepancy between actual and desired level of performance.

Note in the rating system suggested in this section that a negative number means that student performance exceeded standards while a positive number shows that the student did not meet the desired standards.

In summary, the procedures suggested in this section are:

- Identify all available sources of information for each educational objective.
- Establish ranges of performance so that sizes of discrepancies can be assigned.
- Evaluate each source of information according to its validity and reliability.
- Multiply the number assigned to the size of the discrepancy by the number assigned to the quality of the information source.
- Total the weighted discrepancy and obtain an average weighted discrepancy where required.

INSTRUCTIONS FOR EXERCISE 7

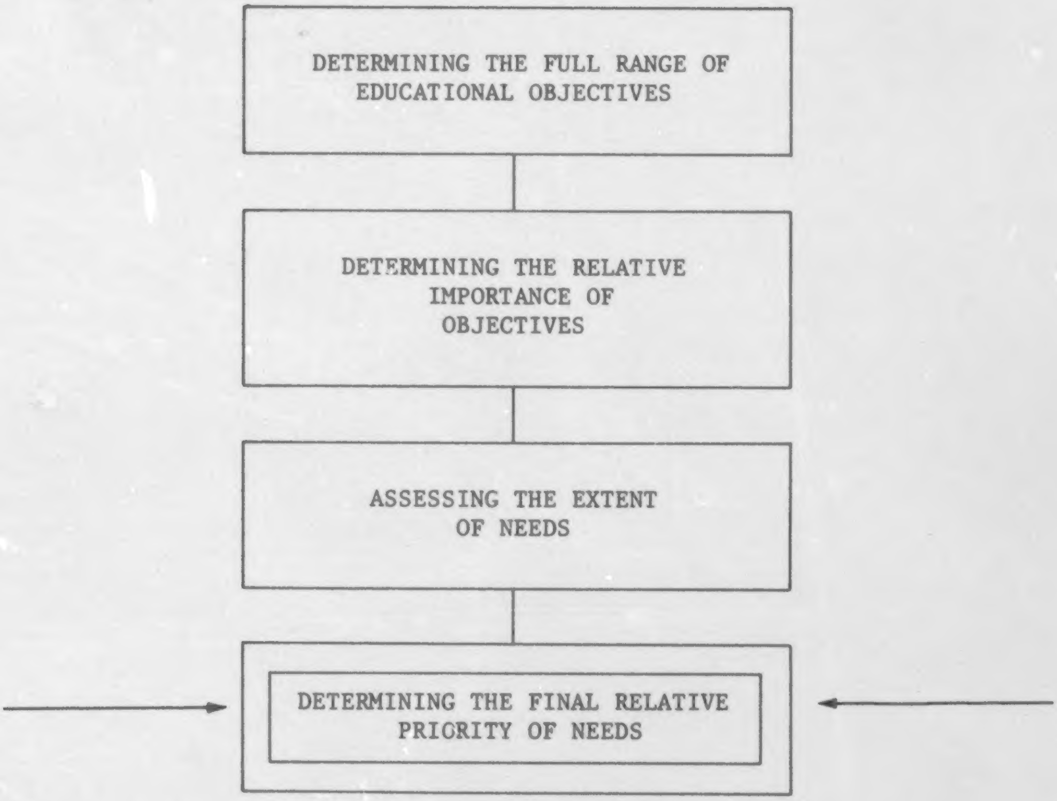
In this exercise, your team will combine information from different sources into a final combined discrepancy rating for five objectives. Work as a team to complete the following three steps:

1. Determine which of the five objectives each information sheet deals with. A single information sheet may be related to more than one objective. Put check marks in the space provided on the bottom of the page.

2. Decide how large the discrepancy is, using the rating scale suggested in Section L. Make a discrepancy rating only for the objectives checked. Remember that in making your discrepancy rating, you must assume a standard based on three areas--your understanding of the objective, the type of information provided, and your knowledge of the school and its students. At this point, accept the information at face value. Do not be swayed by any ideas you have about the quality of the information. Ratings of discrepancy are to be entered in the appropriate blank on the information sheet.

3. Decide how good the information is, using the rating scale suggested in Section L. Since this rating is independent of other considerations, there is only one judgment to make regardless of the number of objectives about which the information deals. Ratings are entered in the appropriate blank on the information sheet.

NEEDS ASSESSMENT STEPS


DETERMINING THE FULL RANGE OF EDUCATIONAL OBJECTIVES
DETERMINING THE RELATIVE IMPORTANCE OF OBJECTIVES
ASSESSING THE EXTENT OF NEEDS
DETERMINING THE FINAL RELATIVE PRIORITY OF NEEDS

DETERMINING THE FINAL RELATIVE PRIORITY OF NEEDS

Introduction

Before you consider the last stage of the needs assessment--determining the relative priority of needs--you should first review what you have already accomplished. As mentioned at the beginning of the workshop, the four-stage needs assessment model proposed is applicable to all educational institutions. Therefore, the contextual information about the institution being evaluated sets the scope and focus of the project. This means that you, as part of an evaluation team, will be asked to examine carefully the variables that constitute the context of the project to ensure that the appropriate kind of questions will be asked and that appropriate data are collected during the needs assessment.

After the context of the project has been established, the four steps of the needs assessment evaluation can begin. In the first step of the needs assessment, you determined the full range of educational objectives that should be considered by the raters. Once you had assembled the comprehensive set of objectives defining the global aspects of the district's consensus, you were able to complete the second step of setting relative priorities of these objectives. This second step served to delineate and provide focus and direction to the project. In the third step of the evaluation process, you determined the extent to which the needs existed by measuring the differences between actual and desired performance for the highly rated objectives. In the fourth and final step of the evaluation, you will use the data you have gathered during the first three steps to determine the final relative priority of needs.

Some of you may note an apparent limitation in the four-step needs assessment strategy suggested; that is, in the three steps already conducted you have treated objectives as if they were independent of each other whereas in fact they are not. For example, if a school has a demonstrated severe reading problem and a large proportion of its students have exhibited signs of poor nutrition, you should probably consider developing a remedial reading program in conjunction with a breakfast or orange juice and roll program. You will recognize the limitations in the procedures suggested in that there has been no attempt to relate problems and solutions in one area to problems and solutions in another. These considerations, however, are more appropriately treated in the program planning phase of an evaluation in which, once you have identified needs, you can begin to plan or revise the instructional or interventional program on those objectives with the highest priorities.

The fourth step of the needs assessment is intended to provide some interface between needs assessment and program planning. In this step of the needs assessment, you will attempt to determine relative priorities of needs, which entails consideration of two major factors: (1) the rated importance of the objective and (2) the size of the discrepancy in terms of student performance.

A third factor that could be included is estimating the chances of developing a plan or a program that will meet the high priority needs with some degree of confidence for success. This factor could be the final consideration for your evaluation team during the needs assessment process or it could be a first step in program planning. Determination of the chances for success of various programs for meeting identified needs provides the interface between the needs assessment and program planning activities. To complete the needs assessment, you must consider the rated importance of the objectives and the assigned size of the discrepancy between actual and desired performance. These two kinds of information can be combined to identify high priority needs.

The rated importance of the objective is the kind of information that you gathered in the second step of the needs assessment. The objectives were rated by groups of raters, and a variety of techniques were used to combine the rating data to arrive at a consensus. Information concerning the size of the discrepancy in terms of performance on the objectives was gathered in the third step.

Section L discusses classifying the discrepancy between actual and desired performance as "small," "medium," or "large." You can generate a matrix such as the one below to obtain a single rating combining both importance of the objective and size of the average weighted discrepancy. Assume that the range of averaged importance ratings for a set of educational objectives is from 1.0 to 4.9. Four class intervals or categories within this range can be arbitrarily established (1.0 to 1.9, 2.0 to 2.9, and so on). These intervals can become the vertical scale of the matrix. The horizontal scale is related to the assigned weighted average discrepancy. Arbitrary intervals can be assigned to the categories of large, medium, small, or no (negative) discrepancy (i.e., large = 6.9 to 5.0, medium = 4.9 to 3.0, and so on). The basic matrix would look like this:

Objectives Priority Matrix

Rated	Size of Average Weighted Discrepancy			
Importance	Large	Medium	Small	No Discrepancy
4.9 to 4.0				
3.9 to 3.0				
2.9 to 2.0				
1.9 to 1.0				

You can now assign numerical values for the points of intersection within the matrix. Assignment of these numbers is entirely arbitrary. A workable approach can be constructed as follows. The point of intersection of least concern or of the lowest possible priority is at the extreme lower right corner. This intersection or cell will represent objectives that have been rated low in priority and for which no discrepancy exists. The numerical value to be assigned to this cell is zero. The cells to the immediate left and immediately above the zero cell can be assigned a numerical value of one. This assignment of cell values can be extended until the matrix looks like this:

Objectives Priority Matrix

Rated Importance	Size of Average Weighted Discrepancy			
	Large	Medium	Small	No Discrepancy
4.9 to 4.0	6	5	4	3
3.9 to 3.0	5	4	3	2
2.9 to 2.0	4	3	2	1
1.9 to 1.0	3	2	1	0

For an objective that received an average rating of importance of 3.6 and for which an assigned discrepancy of medium was determined, you can use a numerical value of 4 as a priority reference. For an objective that received an average rating of importance of 2.1 and for which a small discrepancy was assigned, you can use a numerical priority reference of 2.

Through use of this matrix, you can place each objective in a cell and assign an arbitrary numerical value that reflects both the rating given the objective and the size of the average weighted discrepancy between actual and desired performance on this objective. For your original set of 25 educational objectives, a completed matrix might look like the one on the following page.

Objectives Priority Matrix

Rated Importance	Size of Average Weighted Discrepancy			
	Large	Medium	Small	No Discrepancy
4.9 to 4.0	6 11,18,23	5 9,10,24	4	3 3,13
3.9 to 3.0	5 7,21	4 6,12,19	3 4	2
2.9 to 2.0	4	3 20	2 1,5,17	1 2,14,25
1.9 to 1.0	3 8,22	2 16	1	0 15

Each of the 25 objectives has been placed in a cell to which a numerical value has been assigned. The highest priority value has been assigned to Objectives 11, 18, and 23. The next highest priority has been assigned to Objectives 7, 21, 9, 10, and 24. The purpose of this matrix is to obtain as objective a reading as possible on the highest priority items. No district can begin to attack all of its problems at the same time. This approach provides information that can lead to setting a schedule for concentrating resources on problem areas.

Once priorities have been established, you, as the project decision-maker, could begin to consider the educational objectives for which programs will be planned. Some decision rule is required that will emphasize those variables that contribute to your final choice.

Developing a Decision Model

One model for decision-making that could be considered is based on three factors: (1) rated priority of the objective, (2) utility or value of improving performance on the objective, and (3) probability or likelihood of improving performance by program intervention.

Additional factors or variables should be considered before final choices are made. Primary among these is the cost of an intervention program and the concomitant estimate of cost/effectiveness of the program. A more detailed discussion of the components of the decision model follows.

Rated Priority of the Objective. If all other contributing factors could be equal, this factor should be considered the most important. It is a reflection of the perceived needs and the demonstrated weaknesses within the district.

The Value of Improving Student Performance in an Objective Area. This variable introduces the notion of how much you, as an administrator or project decision-maker, value various levels of performance as measured by formal tests or other instruments or procedures. It indicates the need to increase student achievement from its present level to a higher level. If you are satisfied with the current level of performance in an area, there would be little or no value in improving performance in that area. For example, if parent involvement in building-level decision making receives a high priority rating and yet building-level administrators, as a group, express concern for allowing parent involvement on anything more than a limited basis, you may elect to delay emphasizing this objective.

For a particular objective, the value of improving or changing behavior in a positive direction often depends on two contributing factors: (1) the current level of performance by the student group being evaluated and (2) the typical or representative performance by similar random population groups. To illustrate, you could be considering two areas for curriculum revision--arithmetic reasoning and arithmetic computation. Assume that the rated priorities for each of the representative objectives were the same and that there was no reason to believe that the chances of improvement in one area would be any greater than in the other. Under these circumstances, you might wish to consider the performance of your students compared with those of similar population sample groups. If a typical performance for similar sample groups is the 40th percentile for each area, but the students in your district scored at the 30th percentile for arithmetic reasoning and the 60th percentile for arithmetic comprehension, you would obviously consider it more valuable to spend your resources on the improvement of reasoning skills than comprehension.

The greater the value of improving student performance in an area, the higher the final priority value for that area. Including this variable in the decision model helps guard against selecting an objective for which current student performance is already at a satisfactory level.

Probability of Improving Student Performance in an Objective Area. The third and last major variable in the decision model is concerned with the problem of the effectiveness of any new instructional program in increasing student achievement. For a particular educational objective, the *probability* of improving student performance depends on the current level and typical level of performance as does the *value* of improving student performance. Also, the probability of improving performance depends on the type of instructional or interventional program that is implemented. Some types of programs are much more likely to increase performance than are other types of programs, and each program must be considered in terms of its strengths and weaknesses. Including this variable in the decision model helps guard against planning revisions or changes in an area that is rated as important and in which an improvement is valuable, but in which the probability of improving performance is close to zero.

As an example of the application of the decision model, consider the data from the Bradford Elementary School. In Exercise 5, a tabulation was provided that listed the average rating for the 20 most highly rated objectives. An excerpt from this tabulation, repeating the information related to the five most highly rated objectives with acceptable indexes of agreement for the Bradford Elementary School, is shown on the following page.

Objective Number	Parents	Teachers	Administrator	Average Rating	Index of Agreement
2	4.2	2.7	2.7	3.2	3.0
.					
.					
.					
6	4.5	3.0	3.1	3.5	3.0
.					
.					
.					
11	5.0	3.4	3.6	4.0	3.2
.					
.					
.					
18	4.0	3.7	2.7	3.4	2.6
.					
.					
.					
23	3.1	3.7	3.5	3.4	1.2

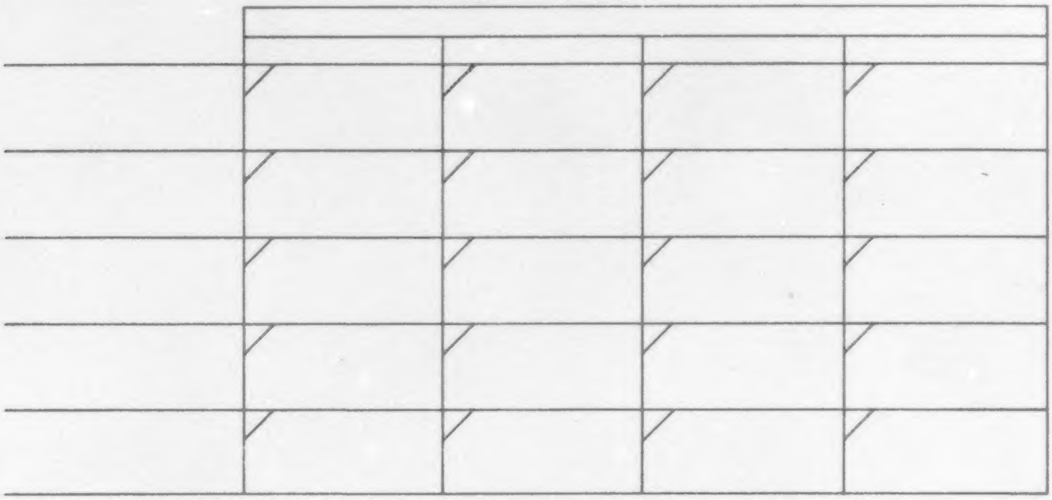
In Exercise 7, you computed the average weighted discrepancy for these objectives. The final results of that exercise yielded these results:

Objective	Objective Number	Average Weighted Discrepancy
Needs Achievement	2	3.5
Application of Mathematics Skills	6	4.0
Reading Skills	11	5.6
Knowledge of History	18	3.0
Nature and Purpose of Science	23	-4.3

You will now be asked to construct an Objectives Priority Matrix using the information from the Bradford Elementary School data. Appropriate intervals for the average weighted discrepancy dimension might be 6.9 to 5.0, 4.9 to 3.0, 2.9 to 1.0, and .9 and below (including all negative values). Intervals for average rating might be 2.0 to 2.4, 2.5 to 2.9, and so forth.

In the space provided below construct and label the matrix, assign numerical values to the cells, and place the number of each of the five objectives in the appropriate cell.

OBJECTIVES PRIORITY MATRIX



Complete the following tabulation.

Objective Number	Average Rating	Average Weighted Discrepancy	Numerical Priority Assignment
2	3.2		
6			
11	4.0		
18		3.0	
23			

If only two objectives can be considered for curriculum emphasis, the two most likely objectives to consider during program planning appear to be numbers 11 and 6, based on the priority rating.

Objective 11 (Reading Skills), with a priority rating of 7, is certainly one that should receive your further consideration. With a priority rating of 5, Objective 6 (Application of Mathematics Skills), should also be seriously considered. Objectives 2 and 18 tie for third, and you should hold them until you have examined Objectives 11 and 6 more thoroughly.

After you have established priority ratings, you should examine the highly rated objectives in terms of the value and the probability of improving performance.

A decision regarding the first concern, that of rating the value of improving performance, will often be purely subjective.

Activities related to deciding the question of the probability of program success is the actual bridge between needs assessment and program planning. This question is most appropriately answered by curriculum specialists who are the resource people within a district that have the most information about alternative curriculum or intervention strategies and the results achieved by the use of these strategies as reported in the professional literature. It is at this point that curriculum or intervention specialists from other school districts, universities, or the private sector are often asked to provide expert information.

There is no set procedure for beginning program planning. Each individual decision maker or committee will operate on this alternative strategy review in a different manner. It is possible to suggest a starting point to provide some structure for the early planning meetings. It is helpful to generate a two-dimensional checklist. One dimension can list the possible alternative strategies. Note the word "possible." At this stage of planning, all strategies should be listed and given at least a preliminary review. The second dimension should include two types of requirements and constraints--those that are absolute requirements of any strategy that could be considered and those that are considered desirable. The matrix could look like this:

	Alternative Strategies			
	Text A	Text B	Text C	Learning Center
Absolute Requirements				
1. No more than 8 per student per year				
2. Multiethnic				
3. Includes staff development				
Desirable Requirements				
1. Diagnostic-prescriptive				
2. Small-group oriented				
3. High motivational content				

This simple approach helps to ensure that all suggested strategies are given at least an initial review and that the concerns about program requirements, absolute or desirable, are noted. As each strategy is examined, check marks indicate strengths and weaknesses of each according to the stated requirements.

DO NOT PROCEED UNTIL TOLD TO DO SO

PLANNING A NEEDS ASSESSMENT

The summary of a needs assessment project is presented below. Use this summary in developing your report outline.

Prestep: Set the Context

Among the factors to be considered are:

- Size and purpose of program
- Available resources
- Constraints
- Social-psychological dynamics
- Political pressures

Step One: Determine the Full Range of Educational Objectives

- Determine the level of objectives appropriate for your program
- Consider the sources of these objectives
- Consider methods for developing such objectives
- Make selections from a comprehensive list of objectives

These objectives will be the subject of further investigation.

Step Two: Determine the Relative Importance of Objectives

- Investigate alternate methods of selecting raters of the objectives
- Select the raters
- Have the objectives rated
- Select objectives which are
  - Highly rated by most groups of raters
  - Highly rated by 1 or 2 groups of raters only
- Make a list of objectives that will achieve consensus among most of the rater groups participating

These objectives will be examined to determine student performance.

Step Three: Assess the Extent of Needs

- Consider all potential sources of information on student performance
- Set standards of performance on objectives
- Decide what will constitute high, medium, and low discrepancies in student performance on objectives
- Develop a cost/effective information collection plan
- Collect the information
- Classify the information in terms of the objective area it refers to, its quality, and the discrepancy level it indicates
- Combine this information to determine the adjusted discrepancy level on each objective

This information provides the basis for establishing final priorities.

Step Four: Determine the Final Relative Priority of Needs

- Make a list of those objectives that have a high rating and a high discrepancy
- Develop a decision model considering such factors as:
  - Priority: importance of goal area and size of discrepancy
  - Potential for success: potential of various programs for meeting high priority needs
  - Cost/effectiveness: cost/effectiveness of high utility programs for high priority needs
- Determine final priorities: plan to allocate resources to those goals that:
  - Are most in need of improvement--high rating and high discrepancy
  - You can realistically work with considering all restraints

These objectives provide the initial information to begin program planning.

LEADER'S MANUAL

Developed at the Center for the Study of Evaluation
University of California at Los Angeles
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EVALUATION WORKSHOP II: NEEDS ASSESSMENT/Preliminary Version

CTB/McGraw-Hill
Monterey, California

EVALUATION WORKSHOP II: NEEDS ASSESSMENT

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INTRODUCTION

This manual describes the Evaluation Workshop II, presents information on preworkshop and postworkshop activities, and provides step-by-step instructions for conducting the workshop.

Before the workshop, the leader should become familiar with all workshop materials. A review of the materials will give him an understanding of the workshop's organization and of the rationale for its procedures.

Any questions regarding the materials or the running of the workshop should be addressed to Director, Department of Programs and Services, CTB/McGraw-Hill, Monterey, California 93940 (408/373-2932).

DESCRIPTION OF THE WORKSHOP

Overview

As leader during the next two days of training, you will direct workshop participants in instructional activities such as selecting and rating objectives, combining ratings, setting standards and collecting data on needs, and selecting important objective areas. You will also lead discussions and activities in obtaining and combining ratings, deciding the relative merits and weaknesses of evaluation instruments, setting learning standards and determining student discrepancies, and selecting objective areas for subsequent planning activities.

Objectives

The major objective of *Evaluation Workshop II: Needs Assessment* is to provide the participant with an understanding of the knowledge and skills needed to conduct or participate in a needs assessment evaluation.

The degree to which workshop participants develop such understanding will be indicated by their attainment of the following specific objectives:

- Outline major phases of a needs assessment and match these with the key procedures and purposes of each step.

- Describe major methods for combining objective ratings for different raters.

- Combine objective ratings from various subgroups to rank order the objectives.

- Identify the major factors in setting up a data collection system.
- Set appropriate standards of student performance.
- Identify objective areas that should be the focus of subsequent planning activities.

Procedure

To achieve its objectives, this workshop allows each participant to participate in a simulated needs assessment evaluation of a fictional school district. The participants, working in three-man teams, will conduct the needs assessment for this district, including determining the full range of educational objectives, determining the relative importance of objectives, assessing the extent of needs, and determining the final relative importance of the needs. Participants gain information on each of these needs assessment activities through a four-part process:

1. Instruction: exposure to learning materials
2. Practice: performance of needs assessment tasks
3. Feedback: information on how the needs assessment tasks should have been performed
4. Discussion: presentation of various viewpoints toward the feedback materials

Feedback and discussion should be combined during team reporting.

Materials

Materials for the workshop include:

- *Leader's Manual*
- *Participant's Notebook*
- *Exercise Pad*
- *Objective Cards*
- *Information Pads*
- *Tests and Answer Sheets*

The *Leader's Manual* describes the step-by-step details for organizing and conducting the workshop. It includes verbal instructions to participants, provides the leader with the necessary points to cover in discussion periods, and outlines procedural tasks in handling the workshop materials. The comprehensiveness of the manual allows the workshop to be conducted by an individual who is not an experienced educational evaluator.

The *Participant's Notebook* contains instructional materials necessary for the workshop and, following the workshop, it can be used as a general reference tool and guide to needs assessment practices and activities.

The *Exercise Pad* contains materials used by the participants to gain practice in the various needs assessment activities under study. In these exercise materials, participants work both individually and as members of three-man teams. Individual exercises are designed to provide practice and insight in completing needs assessment activities, while team exercises are designed to promote a feeling for the need of interaction, cooperation, and communication among those conducting a needs assessment evaluation. Also included in the *Exercise Pad* are answers to the exercises.

The *Objective Cards* are 25 cards with one objective listed on each card. The *Information Pads* contain the information available to supplement the data collection plan decided on by each team.

All of these materials are integrated to provide the participant with instruction, practice, feedback, and discussion. The information contained in the *Participant's Notebook* and certain prepared talks by the workshop leader form the basis of instruction. The exercises provide the practice; the exercise answer keys, other talks by the leader, and some materials in the *Participant's Notebook* constitute the feedback. Periods of discussion are specified in this *Leader's Manual*.

PREWORKSHOP ACTIVITIES

This section discusses the considerations entailed in organizing the workshop.

Selecting Personnel

Leader. The workshop leader does not have to be experienced in evaluation, but he should be familiar with the general nature of evaluation activities and evaluator responsibilities. It is desirable for him to participate in *Evaluation Workshop II* before he conducts one himself.

Coordinators. If they are available, coordinators can assist the leader in handling arrangements for lunch and coffee, in setting up tables, and in other matters. They can also take care of extraneous details so that the workshop leader can concentrate on workshop activities without interruptions. Coordinators are especially desirable if the workshop leader is not experienced. One coordinator for every 21 to 30 participants (7 to 10 teams) is recommended. Each coordinator should have a copy of the materials, particularly the *Leader's Manual*, to inform him of the workshop procedures.

All personnel engaged in conducting the workshop should meet to discuss their respective responsibilities before the workshop starts.

Reviewing Workshop Materials

All personnel, particularly the workshop leader, must read through the workshop materials before the sessions. This can be most effectively accomplished by reviewing simultaneously the *Leader's Manual*, the *Participant's Notebook*, and the *Exercise Pad*. He will then have well in mind the interaction between the leader and the participants and the timing factors entailed in running the workshop. Such thorough preparation is essential to confident leadership and smooth conduct of the workshop.

Obtaining Facilities and Equipment

The following checklist should be used to ensure that appropriate facilities are obtained:

__________ 1. A room large enough to hold the required number of tables and chairs. It is best to schedule the workshop at a location that minimizes outside distractions, discourages participants from wandering in and out of the sessions, and has lunch facilities so that all participants can eat together.

__________2. A large table at the front of the room on which the leader can organize his materials and those to be distributed during the workshop.

__________3. A work table and chairs for each team. A team consists of three participants.

__________4. A public address system, if required by the size of the room and the number of persons participating.

__________5. A chalkboard, chalk, and eraser.

Checking Materials

The leader should arrange to have the following materials at the workshop:

__________1. Two sharpened pencils for each participant.

__________2. One scratch pad per team.

__________3. A name tag for each participant.

__________4. Team identification cards.

__________5. One sign reading "Get Team Assignments Here."

__________6. Team Assignments Forms.

__________7. All workshop materials.

On receipt of the workshop materials, check the Inventory List included on page 11 for the required quantities of each set of materials. In checking, pay particular attention to whether the inventory item calls for one per team or one per participant. If there are any discrepancies between materials ordered and those received, contact CTB/McGraw-Hill immediately (408/373-2932).

Planning Lunch and Refreshments

To maintain the workshop schedule, it is advisable to have lunch and refreshments in the workshop room or in an adjacent room.

It is desirable for the leader to arrange the lunch menu before the beginning of the workshop and thus avoid the confusion and inevitable delays associated with placing individual lunch orders. If the sessions are to be run during normal working hours, only one hour can be spared for lunch.

The leader can schedule coffee breaks or provide coffee and refreshments to the participants throughout the session. The latter approach seems to work better, provided that participants are told politely that they should not spend excessive time around the coffee pot during the sessions.

Notifying Participants

Participants in the workshop should be contacted at least one week before its scheduled date. Emphasize that the workshop, unlike many conferences and meetings, requires their active participation. Discourage participants from making plans that conflict with the workshop sessions. Explain that there will be no free time and inform them of the lunch arrangements.

Assigning Participants to Teams

It is recommended that participants be assigned to teams at the beginning of the workshop. Absences and late arrivals often invalidate assignments made in advance of the workshop.

After participants have completed any required sign-in procedures, direct them to a table identified by a sign reading "Get Team Assignments Here." A coordinator at this table should assign participants to one of three positions on a team. He should use a Team Assignments Form, such as the one shown on page 10, to record his assignments. It is preferable that friends and coworkers be placed on different teams. Last-minute reshuffling of people caused by absences or late arrivals should be avoided.

A simple and effective way of forming the teams is to assign the first five people who arrive as the A members on the first five teams. Place their names in the first column of the Team Assignments Form. The next five people who arrive should be assigned as the B members on these teams, and the third group of five as the C members. This process can be repeated for the next five teams, and so on. The first person to be assigned to a team should be told that he is the team captain. Assignment of this position is necessary to facilitate passing out materials at the correct time. The team captain position is purely administrative.

If there is an extra person, an existing team should be split rather than forming a 4-man team. It is better to have two 2-man teams than one 4-man team because of the organization of the *Exercise Pad*.

If you have more than 75 participants, arrange for at least two coordinators who can share the assignment load.

Providing Name Tags

When a person signs up for a team, he should be given a name tag to wear throughout the session. This name tag should not only include his name (it is important to use the first name that he likes), but also his team number and his letter (A, B, or C).

One simple way of handling the name tag procedure is to make up the tags in advance according to a preregistration list. Include the participant's name and a blank for his team and letter assignment. Each participant can fill in this blank after he receives his assignment.

Name tag holders (preferably of the safety pin type) should be placed on a nearby table so that the participant can insert his name tag in a holder.

A sample name tag is shown below.

Bill Roberts

Team 3/A

Making Final Preparations

The leader and any coordinators should arrive at the workshop room approximately 30 to 45 minutes before the scheduled arrival of the participants. The leader can use the following checklist to ensure that final preparations are made.

__________1. Arrange tables and chairs for the workshop if this has not already been done. A sample of a room layout for 16 teams appears on page 12.

__________2. Place the name tags and the Team Assignments Form on a table close to the entrance. Place the sign "Get Team Assignments Here" in a visible spot on the table. Place the name tag holders on an adjacent table.

__________3. Distribute scratch pads, pencils, and team identification cards.

__________4. Arrange all other materials to be distributed. Do not spread them out. This creates unnecessary curiosity and "loss" of materials.

__________5. Recheck lunch and coffee arrangements.

__________6. Check the public address system if it is to be used.

SAMPLE

TEAM ASSIGNMENTS FORM

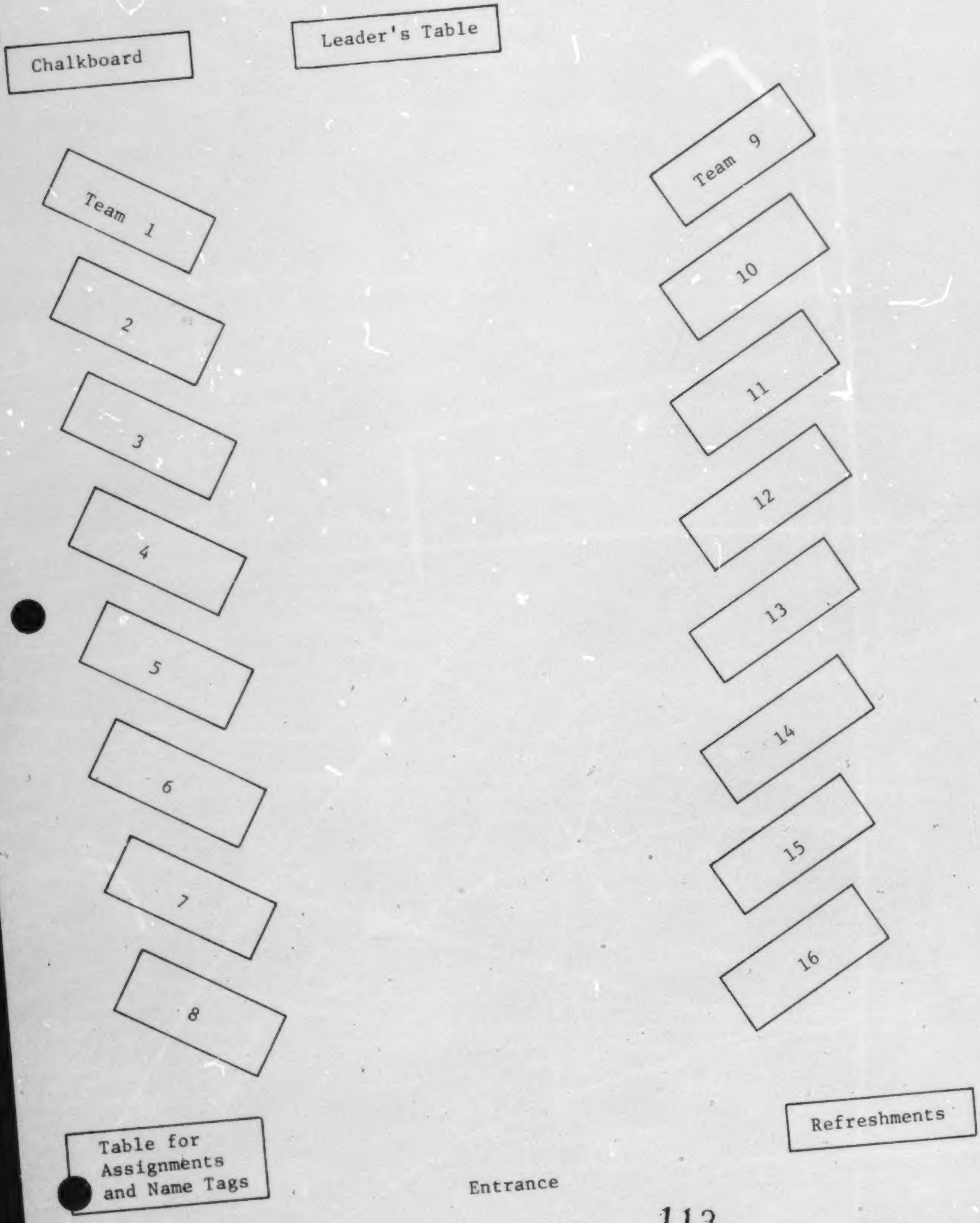
Team Number	Member A	Member B	Member C
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

INVENTORY LIST*

ITEM	DESCRIPTION	QUANTITY NEEDED	QUANTITY ON HAND
Leader's Manual	Dark blue notebook	1	
Participant's Manual	Light blue notebook	1 per participant	
Ancillary Package		1 per team	
2 Test Books (Form A)	Test books		
2 Test Books (Form B)	Test books		
2 Test Books (Form C)	Test books		
6 Answer Sheets	Answer sheets		
1 Exercise Pad	Large grey pad		
Information Pads	22 large pads	1 set of 22 (accommodates up to 45 participants)	
Envelope (preaddressed)	Envelope	1	

* This sheet lists the materials provided by CTB/McGraw-Hill. Other materials and equipment not provided by the publisher are also necessary. They are: chalboard, chalk, eraser, tape recorder, pencils (2 per person), scratch pads (1 per team), name tags (1 per person), team identification cards (1 per team), Team Assignments Form, and a sign reading "Get Team Assignments Here".

SAMPLE ROOM LAYOUT


Chalkboard
Leader's Table
Team 1
2
3
4
5
6
7
8
Team 9
10
11
12
13
14
15
16
Table for Assignments and Name Tags
Entrance
Refreshments

WORKSHOP ACTIVITIES

This section of the *Leader's Manual* provides step-by-step instructions for conducting the workshop. Following these instructions precisely will ensure that the workshop runs smoothly and is completed within two days.

All instructions in boxes at the right side of the pages should be read aloud to the participants. The material not boxed is for information of the leader only.

From time to time, it will be necessary to assist participants with the exercises. If only one team is having a problem with a particular exercise, give individual assistance to that team. However, if two or more teams are having the same problem, hold a general discussion for the entire group.

The General Schedule on page 14 lists the scheduled time for each workshop activity. To help maintain the time schedule, these times are repeated at the beginning of the instructions for each activity. This manual also presents the time allotted for the participants to accomplish certain tasks and provides spaces where the leader can record the times when each activity begins and ends. It is suggested that the leader use a pencil to record this information so that the times can be erased for future reuse of this manual.

Space is also provided after each timed activity for the leader to record any information that he thinks may be helpful in conducting future workshops.

GENERAL SCHEDULE

First Day Activities

8:30 - 9:00	Sign-In and Pretest
9:00 - 9:15	Introductions and Description of the Workshop
9:15 - 9:30	Introduction to Rockpoint District
9:30 - 10:15	Exercise 1: Role Playing in Setting Objectives
10:15 - 10:30	Coffee Break
10:30 - 10:45	Introduction to the CSE Model
10:45 - 11:00	Introduction to Needs Assessment
11:00 - 11:20	Needs Assessment: Step One
11:20 - 11:40	Exercise 2: Objectives
11:40 - 12:00	Feedback: Exercise 2
12:00 - 1:00	Lunch
1:00 - 1:15	Needs Assessment: Step Two
1:15 - 1:30	Exercise 3: Rating Objectives
1:30 - 2:00	Exercise 4: Tallying Ratings
2:00 - 2:15	Discussion of Differences
2:15 - 2:30	Coffee Break
2:30 - 3:10	Combining of Ratings
3:10 - 3:25	Feedback: Combining Ratings
3:25 - 3:40	Discussion of Combining Procedure
3:40 - 4:00	Review of First Day's Activities

Second Day Activities

9:00 - 9:15	Review
9:15 - 10:00	Needs Assessment: Step Three
10:00 - 10:15	Coffee Break
10:15 - 10:35	Determination of Discrepancies
10:35 - 11:00	Buying of Information - Schoolwide
11:00 - 11:30	Processing of Information
11:30 - 11:50	Combining of Discrepancies
11:50 - 12:00	Feedback and Discussion
12:00 - 1:00	Lunch
1:00 - 1:45	Needs Assessment: Step Four
1:45 - 1:55	Feedback: Section N
1:55 - 2:15	Coffee Break
2:15 - 2:45	Summary
2:45 - 2:55	Feedback: Section O
2:55 - 3:10	Review
3:10 - 3:35	Posttest
3:35 - 3:50	Questionnaire

SIGN-IN AND PRETEST (Scheduled Time: 8:30)

As participants arrive, direct them to the Team Assignments table. Make sure that all participants are assigned to teams so that there are three participants per team (in some cases, there may be two-man teams). See that each participant receives a name tag and that each team has the materials required to begin the workshop.

When all participants are seated by team, introduce yourself and anyone else associated with the workshop session.

Announce the arrangements for coffee and lunch and similar housekeeping details. Then,

> SAY: Before beginning the workshop, I would like to find out what you know and feel about educational evaluation. I will collect this information with the instrument to be distributed shortly. Although you are assigned to teams, this should be an individual effort.
>
> When you receive your answer sheet, please fill in the information requested at the top. Do not make any marks in your test book.
>
> When you have completed all the identifying information on the answer sheet, please start answering the questions. This exercise will take about 15 minutes.

Distribute one pretest and answer sheet to each participant as follows:

- Form A to participants with an A after their team on their name tags.
- Form B to participants with a B after their team on their name tags.
- Form C to participants with a C after their team on their name tags.

At the end of 15 minutes (or if everyone is finished before that time),

> SAY: Please raise your hand if you have not finished.

If there are several hands raised,

SAY: You will have 5 more minutes.

If no hands are raised,

SAY: Please pass in your test books and answer sheets. Be sure that your name and team number are on the answer sheet.

Collect the test books and answer sheets and check that names and team numbers are on them. Be sure that every person turns in his test book and answer sheet.

Score the answer sheets while the participants are working on a section by themselves. A scoring key appears on page 73 of this manual. When the answer sheets for the pretest are scored, place them in the pre-addressed envelope.

Do not report the individual scores to the participants, although you may want to report a distribution of the pretest scores.

Starting Time: __________ Comments:

Time Allotted: 30 minutes

Ending Time: __________

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INTRODUCTIONS AND DESCRIPTION OF THE WORKSHOP (Scheduled Time: 9:00)

SAY: Before beginning the actual workshop, we should introduce ourselves and discuss briefly what we will be doing during the next two days. Time restrictions prevent general introductions, although you will have time during coffee breaks and lunch to get to know each other better. However, you should know the team members with whom you'll be working. Take three or four minutes right now to introduce yourself to the other members of your team.

Pause to allow team introductions to take place. Then,

SAY: Now let me tell you what this workshop is about. First of all, this is not a workshop on educational testing and measurement. It is a workshop on educational evaluation. The distinction between the two terms will become clear as we go along.

During the next two days we will be dealing with the specific topic of needs assessment evaluation, a workshop topic that will train you to conduct or participate in a needs assessment in your own educational setting.

Some of you may already have participated in *Evaluation Workshop I*, which provides participants with an orientation to evaluation. The purpose of that workshop was not to train people to become evaluators, but rather to familiarize participants with what an evaluation entails. For further information on the availability of *Evaluation Workshop I*, I suggest you contact CTB/McGraw-Hill, in Monterey, California. It published *Evaluation Workshop I* and is responsible for its dissemination.

As the name implies, this is a work session that will place some demands on you as individuals and as teams. By the end of the session, and especially when you have gone home and restudied the reference materials, you will be able to conduct or participate in a needs assessment for your own educational institution. To meet this objective of the workshop, you will play the role of the evaluation team engaged in a school-by-school needs assessment of a typical school district. In this role, you will receive instruction and training in needs assessment techniques and will be asked to solve actual problems in needs assessment as they develop.

In a few moments you will receive the materials you will be using in the workshop. For each team member, there is a copy of the light blue *Participant's Notebook*. It contains the readings and reference materials that you will take home and have available for study. For each team, there is also a pad of team exercises and feedback materials. To help me distribute the notebooks and complete other administrative duties throughout the session, I would like member A of each team to act as the captain for his or her team. Now I would like the team captains to come to my table and take the materials for their teams. Please do not open them until I tell you to do so.

Monitor the distribution of the *Participant's Notebooks*, one to each team member, and the pad of exercise materials, one to each team. Do not release copies for friends or for people who have not arrived at the workshop.

When all team members have received their notebooks,

SAY: Distribute the *Participant's Notebook* to team members. Do not open them until I ask you to. Now that you have your materials, I want each of you to turn to page iii of the *Participant's Notebook* and print your name, team number, and identification letter at the top of this page.

Remember, this is your own copy of the *Participant's Notebook*, so please don't lose it. It contains reference materials which you will keep at the end of the session. Now I would like the team captain to write in his team number on the title page of the *Exercise Pad*. This has all the exercises you will be doing and the feedback. This pad should be empty at the end of the session; its materials will be incorporated into your individual notebooks.

The different sections of your *Participant's Notebook* are separated by alphabetized dividers. At the end of each section, a written instruction to stop is printed at the bottom of the page. Please do not go past the end of each section until told to do so, since reading ahead generally adds more confusion than information.

The sections in the *Exercise Pad* are also divided to prevent confusion with the materials of the following exercise. Please don't go beyond the dividers until I tell you, since it is important that we work together.

If you have questions of an administrative nature or if you are confused about something, call me and I will come to your team table to help you. However, if you have any questions of a philosophical nature, or if you have conceptual differences, please wait until the end of a unit so that we can share your questions with the whole group. This kind of discussion is an important part of the workshop.

Let's begin the workshop session now. I would like you to turn first to Section A in your *Participant's Notebook*, where you will find the workshop objectives. Take 5 minutes to read Section A.

Starting Time: ________ Comments:
Time Allotted: 15 minutes
Ending Time: ________

INTRODUCTION TO ROCKPOINT DISTRICT (Scheduled Time: 9:15)

Allow the participants about 5 minutes to read the objectives of the workshop. If there are any general questions, take a few moments to answer them. However, if there are questions about the different steps or activities, inform the participants that they will be made clear as you go along.

After about 5 minutes, or when everyone has finished,

> SAY: As you can see, there is a lot of work for us to cover in two days. We will be doing an actual needs assessment of a typical school district. Information about this fictional district, with a description of its general problems, is described in Section B of your *Participant's Notebook*. Turn to Section B now and take 10 minutes to become familiar with this material.

Starting Time: ________ Comments:
Allotted Time: 15 minutes
Ending Time: ________

EXERCISE 1: ROLE PLAYING IN SETTING OBJECTIVES (Scheduled Time: 9:30)

After everyone has read Section B,

SAY: The Rockpoint District is obviously facing some serious problems, and the superintendent is concerned about them. The decision that the superintendent of the Rockpoint District has made at this point is to involve his community in the decision-making process, at least to the extent of having parents and teachers from each school meet with the building principals and start developing objectives for each school within the district.

Your first evaluation job will be to carry out this proposed meeting. Consider yourselves to be an evaluation team that will be conducting a needs assessment and ultimately reporting to the superintendent on the most important objectives that your district should be trying to achieve. In Exercise 1 you will see how this kind of evaluation team or committee effort might actually work in practice. To do this exercise, you will need two things. First, you may want to refer back to Section B of your notebooks to refresh your memories about the kinds of problems in the district. The other information will be found in the *Exercise Pad*. Each of you will be playing a different role in the team. It is extremely important that you follow the directions on the role sheet explicitly.

The *Exercise Pad* materials can be identified by the numbers in the box found in the upper left-hand corner of each page. The first number refers to the exercise and the second number refers to the page within the exercise.

We will now begin Exercise 1. Please do not read the sheet you are given until told to do so.

Now I want the team captains of all the odd-numbered teams to remove pages 1-1, 1-2, and 1-3 of their *Exercise Pad* and distribute these three sheets to the team. It does not matter who gets which sheet.

Pause to allow distribution.

SAY: Now I want the team captains from the even-numbered teams to turn to pages 1-4, 1-5, and 1-6 in their *Exercise Pad* and remove and distribute these sheets to their team members. Again, it does not matter who gets which sheet.

Pause to allow distribution.

SAY: Now I would like you to regroup to form larger teams. Will team number one take the materials they just removed and move to the table with team number two? Team number three should take their materials and move to the table with team number four, and so on.

Repeat this until all the teams have moved into the appropriate odd-even number groupings. Then,

SAY: Are there any questions? Is there a team left with nowhere to go? If there is, raise a hand and I will tell you what to do.

Note: If there is a team left by itself, it will be an odd-numbered team. To enable it to do the exercise, select two participants from different even teams and combine them with the team left over. This will ensure that there is only one principal in each group. Then, SAY: We are now ready to begin Exercise 1. Each of you is going to be suggesting objectives for the Rockpoint District to your team. Develop these objectives as the discussion goes on rather than trying to write them first and then debate them. You will have 30 minutes for this job. Read the instructions on the Exercise 1 worksheet and begin.

After about 30 minutes, or when all the teams have finished Exercise 1,

SAY: You have had a chance to work in a team setting to develop objectives for a school district. I would like to find out now the kinds of objectives the teams developed and any problems that you may have encountered. Would the principal from team number one report to us on the four or five major objectives his team chose?

Have several teams report on the objectives they developed. If difficulties have been encountered, tell the participants that the coffee break will be a good time to discuss problems that may have come up.

Starting Time: __________ Comments:
Time Allotted: 45 minutes
Ending Time: __________

Then,

SAY: Take your role sheet back to your original team table. Now, let's take a 10-minute coffee break. After the break you will return to your original three-member team tables.

COFFEE BREAK (Scheduled Time: 10:15)

Starting Time: __________ Comments:
Allotted Time: 15 minutes
Ending Time: __________

During the coffee break, participants should be encouraged to stay in the workshop room. They should not read ahead in their notebooks.

INTRODUCTION TO THE CSE MODEL (Scheduled Time: 10:30)

After the coffee break,

SAY: The exercise we did before the break was designed to show how an evaluation team could get bogged down in the decision-making process. Evaluation teams are often composed of members who have opposing viewpoints and are willing to present and defend their stance at the expense of reaching a decision. Unless there is some sort of framework for guiding the decision-making process of the team, the usual result is waste of precious resources on unproductive activities. What is needed, then, is a way of taking into account differing points of view so that each is considered in reaching the final decision. In short, a framework of evaluation is required that will allow involvement of different people in the educational decision-making process.

To develop this evaluation framework, it is necessary to define what is meant by evaluation--a term as frequently misunderstood as it is used. I would like to introduce you to a concept of evaluation that will provide us with the necessary framework to guide our workshop activities. This framework was developed by the Center for the Study of Evaluation (CSE).

Several different kinds of evaluation data are collected during a project. To help you gain an understanding of the relationship of these different kinds of data, the evaluation model is categorized into five phases. As you read the descriptions of these five phases, pay particular attention to the first phase of the model--needs assessment. It is with the needs assessment phase that this workshop will be concerned. Turn now to Section C and begin reading. You will have 5 minutes to read this section.

After about five minutes or when everyone is finished,

SAY: How many of you feel a need or desire to complete the optional exercise concerning the CSE Model?

Note: Make a determination of the extent of familiarity that workshop participants have with the model. If a majority of the participants in the workshop have not attended *Evaluation Workshop I* or have not had contact with the CSE Model elsewhere, it is desirable to have them complete the optional exercise in Section C to reinforce their understanding of the model. If this exercise is used, restrict the discussion to provide the needed time.

Optional Exercise

If you decide to give the optional exercise,

SAY: In this exercise you will be working as a team classifying different evaluation activities into the different stages of the CSE Model. Turn now to page C-3 in your *Participant's Notebook* and begin. You will have 10 minutes for this exercise.

After about 10 minutes or when the teams have finished,

SAY: Turn now to page C-6. This contains feedback as to how each activity might have been classified. Take a few minutes to compare your team responses.

After the participants have finished with the feedback go to Section D.

If you decide not to give the optional exercise,

SAY: Are there any questions?

Answer any questions and then go to Section D.

Starting Time: __________ Comments:
Allotted Time: 15 minutes
Ending Time: __________

INTRODUCTION TO NEEDS ASSESSMENT (Scheduled Time: 10:45)

After finishing with the CSE Model,

> SAY: Now that we have an evaluation framework, we are ready to begin the actual needs assessment, the first of the five phases of the CSE evaluation model. The problems of the Rockpoint District presented earlier form the context for the scope and focus of the needs assessment. In the next section you will find a summary of contextual variables that will influence the conduct of the needs assessment in the Rockpoint District. Take a minute or so to review Section D.

After about a minute,

> SAY: It should be recognized that the needs assessment procedures to be introduced in this workshop can be used at many different levels within an educational system. However, the scope and focus of any needs assessment will be set by such variables as the availablity of resources, external constraints, working relationships of the people concerned, and political pressures. It is important to consider these factors and how they might influence the needs assessment for a given situation.
>
> Obviously, many important questions must be asked and different types of information must be gathered in a needs assessment evaluation.
>
> In Section E of your *Participant's Notebook* you will find an outline of a needs assessment. Take 5 minutes now to read the outline in Section E.

After about 5 minutes,

SAY: The primary importance of doing an educational needs assessment is to find out exactly what our objectives should be, how well we have been reaching them, and on which objectives we should be concentrating. It is obvious from the role playing exercise you participated in earlier that not all interested parties in the educational system will agree on the objectives that we should be trying to achieve. How then do we reconcile the conflicts arising from the opinions and beliefs of many diverse groups? How do we establish educational priorities that will meet the needs of our students and that will be acceptable to all concerned?

We must be directed in establishing educational priorities by a decision-making process that has a solid foundation in objective information. The evaluation framework suggested in Section C and the needs assessment steps presented in Section E are designed to help ensure that the right questions are asked, the right person gets the information when he needs it, and the entire effort is structured and directed.

As you can see on the outline shown in Section E, there are four major steps in a needs assessment. During the remainder of this workshop you will receive information and practice on these four steps.

I would like you now to take the role sheet from Exercise 1 and place it at the end of Section E of your *Participant's Notebook*. Please be sure that anytime that I ask you to put exercise materials into your own notebook you do so since these materials are valuable for your future review of needs assessment process. Are there any questions at this point?

Note: Any discussion at this point should be limited either to making clear what has already been done or how the workshop will be run. Questions about specific stages of the needs assessment should be dealt with when that particular stage is reached. When all questions have been answered, begin Step 1 of the needs assessment.

Starting Time: __________ Comments:
Time Allotted: 15 minutes
Ending Time: __________

NEEDS ASSESSMENT: STEP ONE (Scheduled Time: 11:00)

After participants have finished putting the sheet in Section E,

> SAY: Now we are ready to begin the first step of the needs assessment--determining the full range of educational objectives. The basic purpose of this step is to ensure that all potentially important objectives are considered and that none is left out. If this step is not done carefully, we have no way of really knowing if the objectives we work toward and the information we collect on them are helping us to meet the educational needs of the system in which we are working.
>
> The next section deals with the nature of educational objectives and their sources and methods of development.
>
> You will now have 15 minutes to read Section F.

Starting Time: ________ Comments:
Time Allotted: 20 minutes
Ending Time: ________

EXERCISE 2: OBJECTIVES (Scheduled Time: 11:20)

After everyone has read Section F,

SAY: Now that you have all read Section F, I have an exercise for you dealing with the topics it covered. This will be a team consensus exercise in which you will work with the other members of your three-man team. The exercise has one page numbered 2-1. There are three copies of the exercise. Team captains turn to page 2-1 of the *Exercise Pad*. Remove the three copies of page 2-1 and distribute them to the team members.

Pause for distribution. Then,

SAY: Make sure that everyone has a copy. You will have 15 minutes to come to a consensus on the answers to these questions.

Starting Time: ____________ Comments:
Time Allotted: 20 minutes
Ending Time: ____________

FEEDBACK: EXERCISE 2 (Scheduled Time: 11:40)

After about 15 minutes, or when everyone has finished Exercise 2,

SAY: Team captains now turn to the next section of the *Exercise Pad*. This section has the answers to Exercise 2, which you just completed. Check the boxes in the upper left-hand corner of each page. They should be labeled "Feedback, Exercise 2." Please remove the three copies of the feedback sheets and give one to each of your team members. Read this feedback and discuss it with your team for 5 minutes.

Allow the teams 5 minutes to read and discuss the feedback. Then,

SAY: Do you have any points you would like to agree with or perhaps like made clearer?

Encourage teams to discuss any problems or points of disagreement. When discussion is over,

SAY: The material you have just completed is important in terms of problems related to objectives. I want you now to take Exercise 2 and its feedback and place them in the back of Section F of your *Participant's Notebook*.

I want you to get some experience with rating objectives, as discussed in Section F. This is where we will pick up when we begin this afternoon's session. Before we break for lunch, are there any questions you would like to ask about this morning's activities?

Note: If a question and answer period was held, please check the appropriate box below and fill in the nature of the questions asked and the amount of time spent on this activity.

I held a discussion at this point. YES ☐ NO ☐

Nature of questions asked: ____________________

____

____

____

____

Starting Time: ________ Comments:
Allotted Time: 20 minutes
Ending Time: ________

LUNCH (Scheduled Time: 12:00)

LUNCH BREAK: Remember that lunch is between 12 noon (or when morning session is finished) and 1 p.m. Tell participants to be back in the room and ready to work by 1 p.m. Discourage participants from dispersing and encourage discussion of the morning's activities. During the lunch break, the workshop staff should join in discussion sessions with the participants.

Starting Time: ________ Comments:
Time Allotted: 1 hour
Ending Time: ________

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NEEDS ASSESSMENT: STEP TWO (Scheduled Time: 1:00)

After lunch,

SAY: Our simulated school district, the Rockpoint District, is now at the second step of the needs assessment. Because of the many problems entailed in developing objectives, the district has selected a set of objectives from a pool that it will be using in its needs assessment. It is now ready to start the second step--deciding the relative importance of these objectives.

Superintendent Edwards of the Rockpoint District has sets of objectives chosen from a fully comprehensive list. His first job is to determine how to select raters from his district. In a school district, if only elementary principals made the ratings, we would have the priorities of some of the administrators of the district. If only teachers made the ratings, they could be expected to reflect the knowledge and attitudes gained from their daily classroom activities. The superintendent wants ratings from all three groups--parents, teachers, and administrators.

Comparison of ratings among groups can be made by repeating the rating process for each group to be compared. Comparisons would then be made by examining differences in rank or average ratings for each objective. It is also possible to carry out a one-time rating process and analyze the results in different ways to find areas of agreement and disagreement among the raters. The latter method gives us a set of objectives that reflect both the problems in the district and the areas of consensus across groups of raters. This approach is the strategy we will follow in this workshop.

First, however, we must have the objectives rated by a broad cross section of the community. There are at least two sampling methods that we can use to ensure representativeness. One is a random method; the other is stratified. The random method will usually yield adequate samples without extensive statistical labor. The stratified method will usually yield better samples, but calls fcr considerable labor and knowledge of probabilities.

Turn now to Section G of the *Participant's Notebook*. In this section you will find some suggestions on selecting raters for the objectives. Obviously, other methods might be used to meet local problems and needs. You will have 10 minutes to read this section.

Starting Time: ___________
Time Allotted: 15 minutes
Ending Time: ___________

Comments:

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EXERCISE 3: RATING OBJECTIVES (Scheduled Time: 1:15)

After about 10 minutes,

SAY: Assume now that you have been selected as a rater from one of Rockpoint's schools, Bradford Elementary. You will be rating a subset of 25 objectives. You will rate these objectives individually and on the basis of the problems identified for the district. These were listed for you on page B-1 of the *Participant's Notebook*. Refer to page B-1 now for a minute.

Pause. Then,

SAY: Remember, you are looking at these objectives in terms of how they would improve student performance in the problem areas of the Rockpoint District. Remove the *Objective Cards* from the end of Section G at this time.

Pause. Then,

SAY: Page 3-1 in the *Exercise Pad* contains instructions for rating the objectives. Team captains turn now to page 3-1 and distribute the copies to team members.

Allow a few minutes for the distribution of the instructions. Then,

SAY: To add to the realism of how the objective might actually be rated, I want you to assume the same role that you had in Exercise 1 this morning; that is, the role of teacher, parent, or administrator. We will regroup into three groups: parents, teachers, and administrators. All you have to take with you at this time is a copy of the instructions and the set of *Objective Cards* you received earlier. Leave your *Participant's Notebook* at your own table.

I would like all the parents to form a group around the first few tables, all the teachers to move together at the next few tables behind the parents, and all the administrators to form a group around the last few tables.

Note: In groups larger than 20 it is advisable to split the parents into more than one group since there are more of them than teachers and administrators, and tabulating the results for parents requires a large amount of time. When the rating groups are organized,

SAY: The technique we are about to use is called the collective viewpoint approach to objective rating. In this technique, different groups receive the same set of objectives and rate them on a 5-point scale of importance, from 1--least important, to 5--most important. You are to decide which of these objectives are the most important. This kind of information is useful to the principal or other decision-maker in deciding which objectives to assess. By using such data, the decision-maker can justify the selection of a certain set of objectives. More important, however, this technique avoids the problem of group development and consensus since it allows us to select rather than construct objectives.

Remember, work individually to rate these objectives. You will have about 10 minutes to do this.

Read the instructions on page 3-1 and begin to rate the objectives. If you have any questions concerning Exercise 3, please raise your hand.

Starting Time: __________ Comments:
Time Allotted: 15 minutes
Ending Time: __________

EXERCISE 4: TALLYING RATINGS (Scheduled Time: 1:30)

After about 10 minutes,

> SAY: The rating process you have just completed is the first part of the collective viewpoint approach. The decision-maker--in our case the principal of the Bradford Elementary School--is concerned about community opinion on a set of objectives. The process of rating you just went through is about the same as that which would be undertaken in a field implementation of the collective viewpoint approach. Each rater would return his set of rated objectives to the principal, who then tallies the ratings to find out which objectives his community felt to be most important. This is the job we will have in Exercise 4.
>
> In a few moments you will be working with tally sheets similar to sheets that would actually be used in the field. The instructions for doing this part of the exercise are with the tally sheets. First, I need a person from each rating group to record the different ratings.

Select one tally person from each group. Then,

> SAY: Will the tally person in each group turn to page 4-1 of the *Exercise Pad* on the table at which you are now working? There are four copies of page 4-1. Take one copy for your group but leave the other three copies for the people who will be coming back to their own tables later. They will need these copies to put in their *Participant's Notebook*.

Allow a minute for the tally persons to remove the pages. Then,

> SAY: The tally person should now read the instructions on page 4-1 and then explain them to his group.

Allow a few minutes while the tally persons explain the instructions. Then,

SAY: Are there any questions?

Answer any questions. Then,

SAY: Will the tally person now remove pages 4-2, 4-3, 4-4, 4-5, and 4-6 from the *Exercise Pad*? These are the tally sheets. I want each tally person to ask each person in the group how he rated each objective and make the appropriate mark on the tally sheets. The tally person will do this for all raters and for all objectives. You will have about 10 minutes to record the ratings. Begin marking the tally sheets now.

Allow about 10 minutes for the tally persons to record the group ratings. Make sure all have finished. Then,

SAY: You are now ready to average the ratings for each objective. To expedite the computation time, the tally persons should distribute the tally sheets among the group members. Follow the instructions at the top of each tally sheet for computing the objective averages. Begin computing the average ratings now. You will have 20 minutes to do this. Raise your hand if you have any questions about the computational procedures.

This has proved to be a confusing exercise for participants. It is suggested that the leader go over the procedure with participants. Information on tallying is as follows:

INSTRUCTIONS

Compute the average rating in your group for each of the five objectives in the following manner.

SAMPLE PROBLEM

An example, based on 10 raters, follows:

CATEGORY VALUES

	1	2	3	4	5	AVG
	11	1111	11	1	1	
1. Count the number of tally marks in each rating category.	2	4	2	1	1	
2. Multiply this number by the value of the rating category.	2	8	6	4	5	
3. Add up the five numbers obtained in step 2.			25			
4. Divide this number by the number of raters (in this example, the number of raters was 10).						2.5

This is the average. Enter this number in the last column.

Starting Time: __________
Time Allotted: 30 minutes
Ending Time: __________

Comments:

DISCUSSION OF DIFFERENCES (Scheduled Time: 2:00)

After about 30 minutes, or when everyone has finished,

SAY: Exercise 4, which you have just completed, corresponds to what the principal or other administrator would actually do when he uses the collective viewpoint approach in the field. The collective viewpoint approach is one effective way of allowing several groups of raters to select from among a group of potential objectives.

I am not trying to suggest that this approach is the best solution to objective selection. It should be considered as one effective way to gather initial information regarding a set of objectives. In the next unit of the workshop, we will go through some techniques and exercises designed to refine the data that we just computed and direct them toward a broader base of consensus across different groups with different ideas about what the objectives should be.

First, however, I would like to illustrate that differences in viewpoints usually exist. I would like each group to give me its five highest rated objectives. Would the tally person of each group tell me the objective numbers of the five highest rated objectives determined by the averages for that group?

It is desirable to record this information on a chalkboard if possible. If not, record the information on the next page. Obtain the five highest rated objectives from all groups.

	Teachers	Parents	Administrators
1st			
2nd			
3rd			
4th			
5th			

Discuss areas of disagreement or consensus with the groups.

After the different ratings have been discussed,

SAY: Now I would like all of you to make sure that you have a complete set of *Objective Cards* and a copy of page 3-1. Please return to your original team table.

Allow a few minutes for the teams to settle down at their own tables. Then,

SAY: Now I want to make sure that all of you have some materials from the last exercises. Team captains should now open the *Exercise Pad* to page 4-1, remove the remaining three copies of the instructions for tallying, and distribute these sheets to team members.

After a few minutes,

SAY: I want everyone to have at least one tally sheet. It does not matter which tally sheet you get or whether it is marked up. If you do not have at least one tally sheet, go now to one of the other tables and get one. There should be at least one for everybody here.

Allow a few minutes to make sure that everyone has at least one group tally sheet. Then,

> SAY: Now everyone has a copy of the *Objective Cards*, page 3-1, page 4-1, and at least one group tally sheet. I want each of you to place these materials at the end of Section G in the *Participant's Notebook*. Then we are going to take a coffee break. Please be back at your tables in 10 minutes.

Starting Time: ________ Comments:
Time Allotted: 15 minutes
Ending Time: ________

COFFEE BREAK (Scheduled Time: 2:15)

Starting Time: ________ Comments:
Time Allotted: 15 minutes
Ending Time: ________

COMBINING OF RATINGS (Scheduled Time: 2:30)

After the break,

SAY: Before the break, I suggested that the collective viewpoint approach is an effective method of objective selection. It offers a good way to select and rate objectives initially. By using the viewpoints approach, the decision-maker now has a set of objectives that have been rated by different groups of raters. Once he has this information, he can begin the task of analyzing the data and determining the meanings of the ratings. You will now begin analyzing the results of the rating process. This begins by combining all ratings into one set of objectives with priorities. The procedures for combining ratings require mathematical computation and may seem somewhat difficult at first.

However, in Section H of the *Participant's Notebook*, there is information for you on the different techniques. Remember, from this point on you are the evaluation team for the Bradford Elementary School. You will have 35 minutes to read this material and work through the examples. You may discuss the examples with your team members if necessary. If you need any help, raise your hand and I will come to your table. Now turn to Section H and begin reading.

The leader should walk around throughout this exercise to help participants who are having problems with the section.

Starting Time: __________ Comments:
Time Allotted: 40 minutes
Ending Time: __________

FEEDBACK: COMBINING OF RATINGS (Scheduled Time: 3:10)

After about 40 minutes, or when everyone has read Section H,

SAY: In a few minutes we will discuss the results of the different methods of combining objectives. First, however, I want you to examine the feedback showing the correct answers. There are three copies of the feedback numbered 5-1 to 5-5. Team captains should now remove this feedback from the *Exercise Pad* and distribute it to the team. When 5-1 through 5-5 have been distributed to each team member, I want you to place them at the end of Section H in your *Participant's Notebook*. Discuss the results with your team members for about 10 minutes.

Starting Time: __________ Comments:
Allotted Time: 15 minutes
Ending Time: __________

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DISCUSSION OF COMBINING PROCEDURE (Scheduled Time: 3:25)

After about 15 minutes, or when everyone has finished with the feedback,

> SAY: Did any of you have answers which disagree with those on the feedback sheet?

If there are any disagreements, discuss them and attempt to clear them up. Then,

> SAY: Each of these three procedures has certain advantages, depending on the kind of situation you are working in. In large part, the procedure chosen will depend on the context, considering such factors as diversity of groups, the skill and statistical expertise of the person responsible for carrying out the analysis, the number of objectives on which information would and can be collected within the constraints of time and resources, and the opportunity to recycle the rating process.
>
> Are there any questions at this point concerning any of the procedures we have been talking about?

Starting Time: __________ Comments:
Allotted Time: 15 minutes
Ending Time: __________

REVIEW OF FIRST DAY'S ACTIVITIES (Scheduled Time: 3:40)

Answer any questions about exercises up to this point in the workshop. Then,

SAY: At this point in the workshop, we have completed the first two steps of a needs assessment. That is, we have determined the full range of potential objectives and the relative priorities among them. By the time he has reached this step of the needs assessment, the decision-maker, regardless of which technique he uses, has consensus on the relative importance of a set of objectives for his community.

In the next step of the needs assessment, we will examine these important objectives more closely and be concerned with such questions as student performance on them. That will be our first topic when we meet again tomorrow morning.

I would like to close today's session by asking if you have any questions about the first two stages of needs assessment.

When you have finished the review and discussion,

SAY: We have reached the end of the formal portion of the first half of the workshop. I will now collect all the notebooks and *Exercise Pads*. You will be able to keep your notebook after the end of tomorrow's session. Remember, we will start again tomorrow morning promptly at 9 a.m.

Collect all materials so that they are not lost before the next session. If someone is unable to attend the next session, he may keep his notebook.

Note: If you held a discussion period, fill in the information below.

	YES	NO
I held a discussion period:		

Nature of topics discussed: ______________________________

____

____

Time spent: ______________________________________

Starting Time: __________

Allotted Time: 20 minutes

Ending Time: __________

Comments:

SECOND DAY'S ACTIVITIES

The workshop leader and coordinators should arrive at the workshop room 30 to 45 minutes before the session begins. They should check coffee and lunch arrangements and see that the room is arranged properly. Pencils and extra paper should be distributed. *Do not distribute notebooks yet but have them organized by team number* for distribution so that team captains can come to the table and pick up the materials for their teams.

REVIEW (Scheduled Time: 9:00)

See that everyone is seated at his team table. Then,

SAY: Let's review what we have done so far. During the first day of the workshop, you were given instructions for developing a set of potential educational objectives and determining their relative priorities. In addition, you went through several exercises, with different methods, both to select these objectives and to obtain priority ratings for them. At this point in the needs assessment, with the first two steps completed, we have reached consensus on the relative priorities of our objectives. Assume that as the evaluation team for Bradford Elementary, the following 5 objectives were selected as top priority:

No. 2: Needs Achievement
No. 6: Application of Mathematics Skills
No. 11: Reading Skills
No. 18: Knowledge of History
No. 23: Nature and Purpose of Science

We will work with these 5 objectives for the remainder of the workshop.

In practice, we would probably be working with more than 5 objectives. However, given our time constraints, we will be using only 5 to get an idea of how the procedures work.

We know now which objectives are felt to be important, but this is not sufficient information. We still have to find out just how well students are performing on them; that is, what the discrepancies are. This presents us with the difficult question of setting standards of performance, then finding out what student performance is compared with these standards, and deciding how large or small the discrepancy is. To find this out, we conduct the third step of the needs assessment--determining the extent of needs. This will tell us what the most important educational problems are and how well we are meeting them. This is an important step. For example, an objective that was rated high may have a small discrepancy between present student performance and the desired standard. If this were the case, we would not want to allocate a lot of funds to this objective area, despite the fact that it was highly rated. On the other hand, an objective that received a lower rating might have a large discrepancy. It would be advisable to allocate more funds to this objective even though it was not the most highly rated. These are the kinds of issues that we will take up in the third step of the needs assessment. Are there any questions about the purpose of this third step of the needs assessment?

Answer any clarification questions. Then,

SAY: Would the team captains come up to my table now and pick up their team materials? The *Participant's Notebooks* and the team *Exercise Pads* are here on my table by team number.

Wait for materials to be distributed.

Starting Time: ________ Comments:
Time Allotted: 15 minutes
Ending Time: ________

Note: If any participants from the first day have not yet arrived, hold their workbooks until they do. If people arrive who were not participants during the first day, tell them they may stay but only as observers. They cannot receive any materials because of copyright regulations. If they are interested in participating in or sponsoring a workshop, tell them to contact Department of Programs and Services, CTB/McGraw-Hill, Del Monte Research Park, Monterey, California 93940.

NEEDS ASSESSMENT: STEP THREE (Scheduled Time: 9:15)

SAY: In this third step of the needs assessment we as the evaluation team have to consider two important factors. First, we must get an idea of the minimum performance desired on the selected objectives. Second, we must decide what kinds of information must be collected to indicate the current level of student performance on the objectives. When we have established standards and gathered data on performance, we can then decide to which objectives we should be devoting resources.

In this unit of the workshop, as evaluators, you will be setting standards, collecting information, and using that information to decide those objectives on which to focus. To begin this unit, I am going to have you read some material on sources of information and on setting standards of student performance. As you read this material, you may want to note or underline important areas, since this information will assist you in completing an exercise later this morning. This exercise will deal with identifying informational sources, evaluating their quality, and determining the size of the discrepancies between actual and desired standards of student performance.

This information is in your *Participant's Notebook* in Sections I, J, and K.

You have 40 minutes to read these three sections.

Turn to Section I and begin reading now.

After about 40 minutes,

> SAY: The point of these sections was to acquaint you with some important considerations to keep in mind during the third step of the needs assessment. This information will be of value to you in the next exercise.
>
> Are there any questions?

If there are, discuss them fully. It is important that participants understand this unit on data collection.

When the discussion is over,

> SAY: Let's take a short coffee break now and be back at the tables in 10 minutes.

Starting Time: ________ Comments:
Time Allotted: 45 minutes
Ending Time: ________

COFFEE BREAK (Scheduled Time: 10:00)

Starting Time: ________ Comments:
Time Allotted: 15 minutes
Ending Time: ________

DETERMINATION OF DISCREPANCIES (Scheduled Time: 10:15)

After the coffee break,

> SAY: You saw in Sections I and J that a wide variety of information is potentially available to the evaluator to help him in the third step of needs assessment--that of looking for the discrepancies of student performance in important objective areas. Determining discrepancies entails comparing desired standards of performance with actual student performance. Section K provided you with important information about setting appropriate standards of performance.
>
> Section L is an extremely important unit on determining discrepancies. I want you to take 15 minutes to read Section L now and then discuss it with your team members.

Starting Time: __________ Comments:
Time Allotted: 20 minutes
Ending Time: __________

BUYING OF INFORMATION - -
SCHOOLWIDE (Scheduled Time: 10:35)

After about 20 minutes or when everyone has finished,

SAY: Now that you have read Section I, J, K, and L, you are ready to work again as the evaluation team for the Bradford Elementary School and to try to collect information for the entire district. Remove at this time from the back of Section G the *Objective Cards* for the objectives you are to rate -- numbers 2, 6, 11, 18, and 23.

Write these objective numbers on the chalkboard and pause. Then,

SAY: In the exercises coming up, you are going to see a list of possible information you can buy to assess the actual level of students' performance on the objectives. Consider this list as all the possible information available to you, and from it you can develop a plan to collect as much information as you want. However, you only have $750 left from the evaluation budget and the total cost of all the information available is $1,500. Your job is to examine the list and get the best information possible for your money. You may want to refer back to Sections I and J. I want the team captains now to turn to pages 6-1, 6-2, and 6-3 of the *Exercise Pad* and remove them. There is only one copy of the information list since I want the data collection plan to come from the team. You have 20 minutes to develop the information collection plan for the Bradford Elementary School. When you plan is ready, come up to my table and buy your information.

Starting Time: ________ Comments:
Time Allotted: 25 minutes
Ending Time: ________

PROCESSING OF INFORMATION (Scheduled Time: 11:00)

After the team captains have bought their information,

SAY: Now we are ready to use this information to find out what kinds of discrepancies we have in the Bradford School. Section M of the *Participant's Notebook* has the instructions for Exercise 7. When your team understands the instructions, begin to work with the information you just bought. You will have 30 minutes to complete Exercise 7.

Starting Time: ________ Comments:
Time Allotted: 30 minutes
Ending Time: ________

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COMBINING OF DISCREPANCIES (Scheduled Time: 11:30)

After about 30 minutes,

> SAY: Now that the information has been processed, it is time to find out the discrepancy rating for each of the five important objectives we are working with. You will be using the techniques discussed in Section L. I want the team captain to turn to page 7-1 of the *Exercise Pad* and remove the four copies.

Pause. Then,

> SAY: Distribute one copy of page 7-1 to each of the team members and use one copy for recording the team response. You will have 20 minutes to do this exercise. You may review the procedures you are using. This is still a team job.

Starting Time: ______ Comments:
Time Allotted: 20 minutes
Ending Time: ______

FEEDBACK AND DISCUSSION (Scheduled Time: 11:50)

After about 20 minutes,

> SAY: Let's take a look now to see how the different evaluation teams used the information they collected to arrive at combined discrepancy ratings.

Note: This information can be placed in the chart below, or better, placed on the chalkboard.

Have the teams read off their final ratings for each objective in turn. Discussion should focus on the extent of agreement or disagreement, and the reasons for major discrepancies, such as different information used and usefulness of rating scales for making judgments.

Please list any significant comments at the bottom of this page.

	Team Number													
Objectives	1	2	3	4	5	6	7	8	9	10	11	12	13	14
History														
Mathematics														
Reading														
Needs Achievement														
Science														

COMMENTS

After discussion is over,

SAY: The following section contains the feedback for Exercise 7. Because the assigning of quality and discrepancy ratings is so subjective, you may have different ratings for the information sources from those presented on the feedback sheet. For the purposes of the workshop, however, assume that you, as the evaluation team for Bradford, decided on the scores presented. Team captains turn now to the feedback for Exercise 7 in your *Exercise Pad* and distribute the three copies to your team members.

If there are major differences, discuss them. Then,

SAY: Now I want you to take the information you bought from me and split it up among your team. Take the Buying Information sheets (Exercise 6), the individual sheets from Exercise 7, the 5 *Objective Cards*, and the feedback and place them at the end of Section M of your *Participant's Notebook*. When you have done that, we'll break for lunch. Please be back at your tables promptly at 1 p.m.

Starting Time: ________ Comments:
Allotted Time: 10 minutes
Ending Time: ________

LUNCH (Scheduled Time: 12:00)

Announce the lunch arrangements.

Remember that lunch is limited to one hour and that it is a good idea to keep participants together. Discourage participants from dispersing, and encourage discussion of the morning's activities. During lunch, the workshop staff should join in discussion sessions with the participants.

Starting Time: __________ Comments:
Time Allotted: 1 hour
Ending Time: __________

NEEDS ASSESSMENT: STEP FOUR (Scheduled Time: 1:00)

After participants are seated,

SAY: Let's take a few minutes to review what we've done up to this point in the needs assessment. First, we determined the full range of potential objective areas; second, we found their relative priorities; and third, we arrived at discrepancies in the important areas. In the last step of the needs assessment, we will establish the final importance of needs.

Section N of your *Participant's Notebook* discusses factors to consider in determining the final list of relative priority needs. It also describes some techniques and decision models designed to enable you to begin considerations of program planning. In this way, the evaluator or evaluation team can provide a detailed needs assessment report to the decision-maker--what the needs are and what kinds of programs can be developed to meet them. There is an example for you to complete within Section N. Try to work through the example individually. However, you may discuss any problems you have among your team members. Feedback will be provided later. Turn now to Section N of the *Participant's Notebook* and begin reading. You will have 40 minutes to read this information and complete the examples.

Starting Time: __________ Comments:
Time Allotted: 45 minutes
Ending Time: __________

FEEDBACK: SECTION N (Scheduled Time: 1:45)

After about 45 minutes or when everyone has finished,

> SAY: I have some feedback for you concerning the objectives matrix you just completed for the Bradford Elementary School. Will the team captains turn to the next page in the *Exercise Pad*? It is labeled "Feedback Section N" in the box in the upper left-hand corner. Please distribute a copy to all the team members. Discuss the answers with your team members.

Allow about 5 minutes for the teams to read and discuss the feedback. Then,

> SAY: Are there any questions?

After all questions have been answered,

> SAY: We'll have a coffee break now. Before we begin I would like all of you to take the feedback material for Section N and place it at the end of Section N in your *Participant's Notebook*. Be back at your tables in 15 minutes.

Starting Time: __________ Comments:
Allotted Time: 10 minutes
Ending Time: __________

COFFEE BREAK (Scheduled Time: 1:55)

Starting Time: __________ Comments:
Allotted Time: 20 minutes
Ending Time: __________

SUMMARY (Scheduled Time: 2:15)

After all participants are seated,

SAY: The step you have just finished completes the final step of the needs assessment. At this stage you would be ready as an evaluation team to write up the needs assessment report to the decision-maker concerning the important needs of his district and the likelihood of developing programs to meet these needs. I have an exercise for you concerning the preparation of the needs assessment report. The next section of your *Participant's Notebook*, Section O, contains a summary of the needs assessment steps that you have completed during this workshop. Use this summary to prepare an outline of what you think the needs assessment report to the decision-maker should contain. I want you to work as a team in developing this outline. Remember, you are writing the outline for your report to the Superintendent of the Rockpoint District. Include the types of information you feel that he should know. You will have 30 minutes to read Section O and develop your team report outline.

Starting Time: __________ Comments:
Allotted Time: 30 minutes
Ending Time: __________

FEEDBACK: SECTION O (Scheduled Time: 2:45)

After about 30 minutes, or when all teams have finished preparing their team report outlines,

SAY: Will the team captain now turn to the next page of the *Exercise Pad?* It should be labeled "Feedback Section O". Please distribute a copy to each of your team members.

Allow a few minutes for the distribution of the feedback. Then,

SAY: The report outline you have is only our opinion as to what might be included in the report to the decision-maker. Your outline may include steps we have omitted. The important point, however, is that you describe the major steps and what has to be done in each step during the needs assessment.

Are there any questions on the report?

At this time, would you place your outline and the feedback after Section O in your notebook?

Starting Time: ________ Comments:
Allotted Time: 10 minutes
Ending Time: ________

REVIEW (Scheduled Time: 2:55)

Answer any questions. Then,

SAY: Let me summarize briefly what we have done over the past two days.

As you now know, there are four major steps in a needs assessment. Regardless of the particular setting, these steps are the same.

First, we set the context of the needs assessment. After this has been done, the four major steps are:

1. Determine the full range of potential educational objectives.
2. Determine the relative importance of these objectives.
3. Assess the extent of needs.
4. Determine the relative priorities of needs.

A needs assessment conducted in this way can be used at all levels of the educational system, from the individual pupil through classrooms and schools and districts to a state or even the nation. It gives us vital information needed to:

1. Identify relative priorities of a full range of potential needs.
2. Make planning decisions about program development or modification to meet these needs.
3. Justify to concerned constituents why we focused on some needs and not others.
4. Gather baseline data to be used for assessing subsequent changes in student performance.

During the first step of the needs assessment--determining the full range of potential objectives--we saw that it is better to select than to construct objectives.

In the second step--determining the relative importance--we went through several methods of rating objectives and combining these ratings to arrive at a set of highly rated objectives.

During the third step--assessing the extent of the needs--we had analyzed problems and information to determine discrepancies between present and desired student performance.

In the final step of the needs assessment--determining the relative priority of needs--we were concerned with integrating major variables in a systematic way to provide the justification and basis for program planning.

I would like now to use our remaining time to discuss and clear up any points you may wish to raise about the workshop. If you have any questions, let's discuss them now.

Conduct a question/answer period. Record the questions asked on the sheets provided.

Types of questions asked:

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________

Starting Time: ________ Comments:
Allotted Time: 15 minutes
Ending Time: ________

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POSTTEST (Scheduled Time: 3:10)

Following the discussion,

> SAY: It is now time to evaluate this workshop. You will use two instruments: a posttest now and a questionnaire later. Your posttest will be a different form of the test that you took as a pretest. Participant A will take Posttest Form B. Participant B will take Posttest Form C. Participant C will take Posttest Form A.
>
> Are there any questions?

When all questions are answered,

> SAY: I am now going to distribute the posttests. Please fill in the information requested at the top of the answer sheet and begin the test. You will have 25 minutes.

Distribute the posttests as follows:

- Form A to participants with C on their name tags.
- Form B to participants with an A on their name tags.
- Form C to participants with a B on their name tags.

Starting Time: __________ Comments:
Time Allotted: 25 minutes
Ending Time: __________

QUESTIONNAIRE (Scheduled Time: 3:35)

At the end of 25 minutes,

> SAY: Will the team captains please turn to the last set of pages in your *Exercise Pad*? You will find three copies of the *Participant's Questionnaire*. Please distribute one to each team member. Each participant should fill out his own questionnaire. You will have 15 minutes.

The leader can use this time to collect and score the posttests.

At the end of 15 minutes or when everyone has finished, collect the questionnaires and place them in the envelope marked for return to CTB/McGraw-Hill.

To avoid embarrassing some participants in the presence of their co-workers, you should not report individual scores.

> SAY: Time does not permit review of scores with each of you individually. Your scores on the test will be sent to you along with a copy of the distribution of group pretest and posttest scores.

If you have had time to prepare the distribution figures, you may wish to place them on the chalkboard for discussion at this time.

When discussion is over, announce the end of the workshop.

Be sure that individual scores and a comparison of distributions are mailed to participants as soon as possible. Also, return both sets of answer sheets and the questionnaires to CTB/McGraw-Hill in the envelope provided.

Starting Time: __________ Comments:
Time Allotted: 15 minutes
Ending Time: __________

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SCORING KEY

Listed below are answers to the questions on the pretest/posttest, Forms A, B, and C.

Form A	Form B	Form C
1. c	1. d	1. d
2. b	2. a	2. a
3. c	3. b	3. a
4. a	4. d	4. a
5. b	5. c	5. b
6. a	6. d	6. c
7. c	7. b	7. d
8. b	8. a	8. c
9. c	9. d	9. b
10. d	10. c	10. b
11. d	11. a	11. d
12. a	12. b	12. c